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# Psychological Abstracts

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## EDITORIAL NOTE

Entries numbered 3806 and 3808 list for the first time two new journals which will be added to our regular exchange list. *Human Relations*, with the purpose of "the integration of the social sciences at an international level," is jointly sponsored by the Tavistock Institute of Human Relations, London, and the Research Center for Group Dynamics, Massachusetts Institute of Technology, Cambridge, Mass. Dorwin Cartwright is the Chairman of the American Editorial Committee. He may be addressed at the Research Center. *The Journal of Child Psychiatry*, under the editorship of Dr. Ernest Harms, has appeared after an unfortunate, but unavoidable, delay. It will be devoted to problems of the psychopathology of childhood.

## GENERAL

3780. Abrahamsen, David. Otto Weininger—and bisexuality; a psychoanalytic study. *Amer. J. Psychother.*, 1947, 1, 25-44.—Excerpts from the author's *The mind and death of a genius*. (See 21: 2090).—E. M. L. Burchard.

3781. Fodor, Nandor. The psychology of numbers. *J. clin. Psychopath.*, 1947, 8, 525-556.—This article is the first of a series to be presented concerning the psychology of numbers. This article presents some illustrative cases of number dreams and then discusses the philosophy and psychology of the 10 digits.—G. A. Muench.

3782. Montagu, M. F. A. Selection and the mental characters of mankind. *Amer. J. phys. Anthropol.*, 1947, 5, 244.—Abstract.

## THEORY AND SYSTEMS

3783. Bierens de Haan, J. A. Animal psychology and the science of animal behaviour. *Behaviour*, 1947, 1, 71-80.—The writer defines psychology as the science of psychic realities or of psychic phenomena. These phenomena have two outstanding characteristics: (1) they form our most direct and best knowledge, and (2) they are known only directly in ourselves. Also, these phenomena do not have an independent existence, but are bound to ourselves or to another person as a living subject. Animal psychology is the science of the psychic phenomena in animals. The objectivist's position in psychology has been based upon one of two possible objections to the above definitions. Firstly, they may doubt the existence of subjective phenomena in other animals, or secondly, they may doubt the possibility of knowing these inner experiences in other animals. The writer believes that both objec-

tions are groundless. It is possible to deduce inner experiences by observing overt behavior. This faculty of the human mind he terms "sympathetic intuition." "We, therefore, reject objectivism in its different forms, as an inadequate way of explaining animal behavior. There is more in the animal's world than stimuli in his surroundings and movements of his limbs. And as we know this, we also wish to know what it is that goes on in his mind."—L. I. O'Kelly.

3784. Falk, Maryla. (Calcutta U., India.) The oldest psychology: terminus a quo and aspects. *Indian J. Psychol.*, 1943, 18, 106-116.—Historical observations on the development of Yoga psychology in India.—G. A. Kimble.

3785. Ghose, Rabi. (Calcutta U., India.) Remarks. *Indian J. Psychol.*, 1943, 18, 153-156.—Criticism of an article by S. C. Mitra (21: 3788). The author feels that the many divergent views in psychology are inevitable and that, at present, synthesis is impossible. Each school has its reasons for existence. Even within the psychoanalytic school, which Mitra considers basic to psychology, there are disagreements. Mitra made the point that psychology deals with intangibles. The present author feels that, in view of recent advances, this is no longer completely justified.—G. A. Kimble.

3786. Goldstein, Kurt. (City Coll., New York.) Organismic approach to the problem of motivation. *Trans. N. Y. Acad. Sci.*, 1947, 9, 218-230.—It has been widely accepted, e.g., in Freudian theory, that the basic motivating force of the organism is the trend for release from tension. This mistaken notion has resulted from regarding the activity of parts of the organism as isolated from the rest of the organism, as in the abnormal. Goldstein sees as the organism's basic drive, discernable in both the normal and the pathological, the trend for self-realization or for the full utilization of all the individual's capacities. Only in this light can a rational interpretation be made of opposite responses to defects differing only quantitatively, each of which makes possible the maximal adjustment of the organism under the peculiar circumstance. This approach also reveals the fallacy of considering "special drives" as separated or isolable factors which may interact only secondarily.—F. W. Finger.

3787. Köhler, Wolfgang. (Swarthmore Coll., Pa.) Gestalt psychology; an introduction to new concepts in modern psychology. (Rev. ed.) New York: Liveright, 1947. Pp. 369. \$2.50.—Originally published in 1929, the text has been revised and simplified (see 3: 2130). The salient features of Köhler's views are presented in ten chapters, all written in essay form. The first three present an

analysis and critique of the differences between Behaviorism and Introspectionism, with a plea for utilizing both qualitative and quantitative methods of observation. Theoretical and practical aspects of Gestalt theory are presented in topics on: Dynamics as Opposed to Machine Theory; Sensory Organization; The Characteristics of Organized Entities; Behavior; Association; Recall; and Insight. References at the end of each chapter.—H. P. David.

3788. Mitra, S. C. (*Calcutta U., India.*) **Need for a psychology to replace psychologies.** *Indian J. Psychol.*, 1943, 18, 146-152.—The author objects to the great diversity of opinion among the various schools of psychology and sums up the basic tenets of his own position in 7 points as follows: (1) the task of psychology is the study of the whole individual; (2) psychology should concern itself with the social aspects of behavior; (3-4) both behaviorism and introspectionism have their usefulness because (5) behavior and mental states are related and these complex interrelationships cannot be ignored; (6) psychology should draw freely from other sciences; (7) psychoanalysis should be the basis of all psychological investigation.—G. A. Kimble.

3789. Morf, Gustav. **Das Prinzip "Pars pro toto" in der Psychologie.** (The principle "pars pro toto" in psychology.) *Schweiz. Z. Psychol. Anwend.*, 1947, 6, 69-77.—The principle of *pars pro toto* seems to occupy a key position in mental economy by enabling the mind to represent any whole by one of its parts. Likewise any part is interpreted as belonging to a whole. This process of integration, which is more than reintegration, is not only the basis of our judgments but also a source of errors.—K. F. Muensinger.

3790. Naidu, P. S. (*Allahabad U., India.*) **On Woodworth's psychological theory.** *Indian J. Psychol.*, 1943, 18, 21-29.—This is a criticism of Woodworth's psychological system as presented in Heidbreder's *Seven Psychologies* and in Woodworth's elementary textbook (no indication of which edition). The concepts of dynamism, set, activity in progress, and purpose are considered one at a time. In each case, the author concludes that Woodworth's position represents a sort of half-way house between mechanistic behaviorism and the hormic psychology of McDougall. For each concept, the author argues that Woodworth's position is untenable and that the concept acquires real meaning only within the framework of McDougall's psychology which is the school of the author's choice.—G. A. Kimble.

3791. Sen, Indra. **"The integration of the personality."** *Indian J. Psychol.*, 1943, 18, 31-34.—In his book, *The Integration of Personality*, C. G. Jung argues that the Indian Yogis attain an existence in which the unconscious is in complete control of their lives. The author, on the contrary, believes that this ecstatic state, samadhi, is a super-conscious existence.—G. A. Kimble.

3792. Sutermeister, Hans M. **Neue Gesichtspunkte in der Psychologie in gemeinverständlicher**

**Darstellung.** (New viewpoints in psychology in elementary presentation.) Bern: Huber, 1943. Pp. 32. Fr. 1.45.—The common origin of all objective and subjective schools of psychology is found in Descartes' *res extensa* and *res cognitans*. As the *res extensa* represent the world which can be "looked at," it is the basis for the objective, measurable science. Into the *res cognitans* Descartes placed himself with his *cogito ergo sum*, and thus is also the founder of the subjective schools of thought. The author condemns the latter as "prelogic," a primitive state of thought, in which philosophy remained, since it did not dare to attack religious ethical concepts. Objective scientists were able to throw light on many phenomena which could not otherwise be explained satisfactorily: modern brain research supports the findings of the depth psychology by demonstrating the difference in the functions of the "old" and the "new" parts of the brain, especially the adaptability of the cortex. The trend in the development of man is toward increasing cerebration. This development is not a continuous one, but is characterized by regressions, which have the purpose to rest the burdened brain. Jazz music, various fashions, certain political ideas can be understood as such regressions.—R. Seidler.

#### METHODS AND APPARATUS

3793. Brubach, Howard F. (*National Inst. Health, Bethesda, Md.*) **Improved cage designs for use in handling monkeys.** *Science*, 1947, 106, 18-19.—Three units are described. One is used as the living cage for 2 monkeys and constructed so that either animal can be easily transferred to a second unit, a smaller, individual cage for transporting. The third is a cage used for treatment and is built so that by manipulating controls outside the cage the animal can be restrained, a limb drawn out through the most convenient opening and the necessary work done with a minimum of disturbance from the animal.—F. A. Mote.

3794. Porter, W. T., & Pratt, F. H. **A convertible kymograph with synchronous motor, and a timing pendulum for universal driving current.** *Fed. Proc.*, 1947, 6, 182.—Abstract.

3795. Tufts College. **Report on the Tufts trainer.** (1942; Pub. Bd. No. L60555.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 32. \$1.00, microfilm; \$3.00, photostat.—The apparatus described in this report was developed at Tufts College for use in psychological and physiological problems arising in connection with use of stereoscopic range finders and height finders. Other possible uses are for training and selecting stereo-operators. Descriptions of Models I and II and test results with the trainer are given. Appendix I gives specifications of Model I, including a chart to be used to determine the armature voltage required to obtain a desired target drive speed. Appendix II describes the integrator used with the trainer, which is an electrical device for integrating deviations making it possible to secure at the end of each trial readings indicative

of the subject's performance during the trial.—(Courtesy of *Bibl. scient. industr. Rep.*, U. S. Dep. Commerce).

## STATISTICS

3796. Berkson, Joseph. "Cost-utility" as a measure of the efficiency of a test. *J. Amer. statist. Ass.*, 1947, 42, 246-255.—Efficiency of prediction of an individual's belonging to one of two mutually exclusive categories is considered in terms of the proportion of true A's assigned to A (utility) and the proportion of true B's assigned to A (cost). Two tests are to be compared on the basis of their comparative costs for the same utility. A single index (mean-cost-rating) for the special case of a test that can be used at any utility and several tables are presented.—F. Gehlmann.

3797. Brundage, E. G. The correction of correlation coefficients for restriction in range. In Kelly, G. A., *New methods in applied psychology*. (see 21: 4140.) 1947. Pp. 181-185.—In general, Kelley's formula for correcting correlation coefficients for restriction in range of talent rests upon assumptions which are only approximately satisfied in actual situations, and does not reduce the variability of *r*'s obtained from various samples. It does, however, provide the best available estimate of how effective a test will be when it is used on an unselected population.—C. M. Louttit.

3798. Buros, Oscar Krisen. Statistical methodology index. *J. Amer. statist. Ass.*, 1947, 42, 353-355.—Eighth of a series presenting statistical methodology literature published in 1945 to date.—F. Gehlmann.

3799. Lawshe, C. H., Jr., & Mayer, James S. (*Purdue U., Lafayette, Ind.*) Studies in item analysis: I. The effect of two methods of item validation on test reliability. *J. appl. Psychol.*, 1947, 31, 271-277.—Flanagan's correlation method of item analysis was compared with Lawshe's D-value nomograph method in selecting test items from 300 elementary psychology examination questions. More reliable 20-item tests were selected by the Flanagan method, although it did not select shorter tests of higher reliability than the total test, while the D-method appeared superior in selecting tests of 80 or 100 items and produced a 100-item test of greater reliability than the total test.—H. Hill.

3800. Lewis, Don. Size of sample in military training research. In Kelly, G. A., *New methods in applied psychology*. (see 21: 4140) 1947. Pp. 185-189.—In spite of the a priori assumption that with so many thousands of men in the Army experimental groups can always be large, actual practice finds the administrative procedures often reduce samples to very small size. Experience has shown that small sample theory and analysis of variance techniques do not serve in military research. Therefore experimental design should involve as few variables as possible and be based on as large samples as possible.—C. M. Louttit.

3801. Mather, K. (*John Innes Horticultural Inst., London.*) Statistical analysis in biology. (2d. rev.

ed.) New York: Interscience Publishers, 1947. Pp. 267. \$5.00.—The text is designed as an elementary exposition of methods of analysis, especially those pioneered by R. A. Fisher. Major topics considered are tests of significance and of observations, sums, differences, and means; degrees of freedom and the analysis of variance; planning experiments; regression; correlation; analysis of frequency data; estimation and information; transformations, including angular and probit transformations. Most examples are from genetics although some illustrate experiments with animals. (See 18: 27.)—W. L. Wilkins.

3802. Penrose, L. S. The elementary statistics of majority voting. *J. roy. statist. Soc.*, 1946, 109, 53-57.—The application of some elementary statistical principles to the problem of representative government leads to the conclusion that small electorates are less susceptible to control by resolute blocks than are large electorates. Holding all factors except size constant, a representative is elected by an electorate proportional to the square root of the total number of electors.—F. Gehlmann.

3803. Swineford, Frances, & Holzinger, Karl J. (*U. Chicago, Ill.*) Selected references on statistics, the theory of test construction, and factor analysis. *Sch. Rev.*, 1947, 55, 363-368.—A bibliography of 51 titles, selected from publications appearing mainly in the period March, 1946, to March, 1947, is presented. No articles dealing primarily with the use of tests are included.—R. C. Strassburger.

3804. Yates, F. A review of recent statistical developments in sampling and sampling surveys. *J. roy. statist. Soc.*, 1946, 109, 12-43.—"A summary of various sampling methods that are commonly employed and their interrelationships, together with an outline of the appropriate methods of arriving at estimates of the quantities under survey, and determining the errors to which these estimates are subject." Discussion follows the review.—F. Gehlmann.

3805. Zeisel, Hans. (*McCann-Erickson, Inc., New York.*) *Say it with figures*. New York: Harper, 1947. Pp. xvii + 250. \$3.00.—This is a manual for statisticians in the field of consumer and opinion research. Part I deals with problems of classification in tabulating reasons, multiple answers, and "don't knows" or "no answers." Part II, on means of numerical presentation, includes chapters on the functions of percentages, the direction in which percentages should be run, tables with 3 and more dimensions, and indices. Part III, on tools of causal analysis, describes and illustrates the use of cross-tabulations in refining and explaining relationships and includes a chapter on the panel technique.—N. L. Gage.

## REFERENCE WORKS

3806. Fairley, Thomas [Managing Ed.]. *Human relations; studies towards the integration of the social sciences*. London: The Tavistock Institute

of Human Relations, 1947. Vol. 1, No. 1, 1947. Quarterly. \$7.00 per volume.

3807. Fischer, Robert P. (*U. Florida, Gainesville.*) Rapparlie, J. H., & Gibbons, C. C. A system for coding, filing and using bibliographical material for research purposes. *J. appl. Psychol.*, 1947, 31, 329-339.—"This paper suggests the use of the McBee Keysort system as a method of handling bibliographical material. Application to the field of psychology is made for the purpose of illustration. A Keysort card is shown for the use of psychologists in recording pertinent information regarding each reference. The codes necessary for using the system are presented including a code for classifying the subject-matter of psychology."—H. Hill.

3808. Harms, Ernest. [Ed.] *Journal of Child Psychiatry*. New York: 30 West 58th Street. Vol. 1, Section 1, 1947. Irregular. \$5.00 per volume.

3809. Jones, W. Paul. (*Iowa State Coll., Ames.*) Writing scientific papers and reports. Dubuque, Ia.: Wm. C. Brown, 1946. Pp. x + 115. \$2.50.—Primarily designed for students in engineering, this book approaches the problem of reporting in any science with the intention of presenting "problems in scientific exposition, . . . instruction and practice in organizing ideas and communicating them to the reader." After an introductory chapter, there follows material on definition, kinds of statements, classification, analysis, the abstract, the book review, reports, scientific style, and mechanics of expression. Where customs differ in writing, alternatives and preferences are indicated. Frequent examples are provided and each chapter is followed by student exercises.—R. S. Daniel.

#### HISTORY AND BIOGRAPHY

3810. Hellpatch, Willy. (*U. Heidelberg, Germany.*) Medizin und Psychologie. (Medicine and psychology.) *Dtsch. med. Wschr.*, 1946, 71, 41-45.—Twice medicine has concerned itself with psychology. The first time was when Fechner, Wundt, and Kraepelin as medical men placed psychology on a scientific footing, and produced a psychology without a soul. To medicine of the 19th century the author attributes the bringing of psychology out of the clouds of metaphysics and the placing of it on the *terra firma* of materialism, physiology, mechanism, and associationism. Then came Brentano and cultural science psychologists opposing this psychological materialism and re-erecting metaphysical arguments for a psychology with a soul. Külpe of the Würzburg School, the *Gestaltqualitäten* psychologists, and ultimately the Gestalt psychologists adduce experimental evidence in support of a psychodynamics, of "a synthetic knowledge *a priori*." The second time that medicine concerned itself with psychology was in the twentieth century when it stepped into the breach between dynamism and mechanism and threw its support beginning with Freud behind a psychology which is at once practical and dynamic and which as psychotherapy, clinical psychology,

the new psychiatry, and psychosomatics seeks to make and preserve men sane.—F. C. Sumner.

3811. Olmsted, James Montrose Duncan. (*U. California, Berkeley.*) Charles-Edouard Brown-Séquard, nineteenth century neurologist and endocrinologist. Baltimore: The Johns Hopkins Press, 1946. Pp. 253. \$3.00.—This biography of the colorful Anglo-French-American scientist was the subject of a course of lectures at the Johns Hopkins Institute of the History of Medicine under the Hideyo Noguchi lectureship. The biography is divided into three parts: (1) Mauritian student and free-lance investigator in Paris; (2) His neurological practice and American professorships; (3) In the chair of medicine at the College de France. The author considers Brown-Séquard's major contribution to physiology to be his demonstration of the crossing over of sensory impulses in the spinal cord and of the consequences of hemisection of the cord. 29 references.—A. L. Benton.

3812. Stekel, Hilda. Autobiography [by] Wilhelm Stekel, M. D. Introductory note. *Amer. J. Psychother.*, 1947, 1, 183-188.—As an introductory note to his Autobiography (to be published in this journal), Wilhelm Stekel's wife gives an account of his last days in England preceding his suicide on June 25, 1940 in London.—E. M. L. Burchard.

#### PROFESSIONAL PROBLEMS OF PSYCHOLOGY

3813. Barron, Margaret E. Role practice in interview training. *Sociaty*, 1947, 1, 198-208.—In training interviewers it has been found useful to have them practice in actual social situations. A transcript of several short interviews "shows how a counselor gained insight into the danger of 'manipulative counseling' and illustrates the use of role playing in interview training."—R. B. Ammons.

3814. Braceland, F. J., & Hunt, W. A. Psychology in a psychiatric program. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 201-206.—The authors, a psychiatrist and a psychologist, describe the coordinated function of the two professions in the Naval Medical service. Data from a survey of naval establishments show the frequency with which psychologists have duties other than psychometric. Comment is made on 5 points of possible friction between the 2 professions.—C. M. Louttit.

3815. Brill, N. Q. Psychology and psychiatry in the Army. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 207-208.—A brief statement describing the relations of clinical psychologist and psychiatrist in the Army medical service.—C. M. Louttit.

3816. Jenkins, John G. New opportunities and new responsibilities for the psychologist. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 1-13.—The thesis of this "key-note address" of the Maryland Conference on Military Psychology is that psychology having passed through a first phase of "local loyalty," and a second

phase of "professional loyalty" is now on the threshold of "social loyalty and social responsibility." The opportunities and responsibilities of this third stage in the historical development of psychology "demands that trained investigators turn their attention to the most pressing social problems" even at the expense of neatness of results.—C. M. Louttit.

[See also abstracts 3872, 3970, 4049, 4062, 4126.]

#### PHYSIOLOGICAL PSYCHOLOGY

3817. Ashby, W. R. Dynamics of the cerebral cortex. XIII. Interrelations between stabilities of parts within a whole dynamic system. *J. comp. physiol. Psychol.*, 1947, 40, 1-7.—The writer presents a mathematical analysis of dynamic systems with special reference to the conditions of stable or steady states. He shows that the stability of parts of a complex dynamic system does not insure an equal degree of stability of the total system. It follows from this that "parts can form a stable whole if joined one way but form an unstable whole if joined another way" and that "no system can act as a 'stabilizer' in general, its effect on another system depending on interactions between the two acting as a whole." This analysis is applied to the physiological problem of CO<sub>2</sub> concentration and regulation in the blood.—L. I. O'Kelly.

3818. Barcroft, H., & Millen, J. L. E. On the heat production in human muscle during voluntary contraction. *J. Physiol.*, 1947, 106, 13-14.—Abstract.

3819. Brown, G. L., Bülbbring, Edith, & Burns, B. Delisle. (National Inst. Medical Research, London, England.) The effect of adrenaline upon striated muscle. *J. Physiol.*, 1947, 106, 15-16.—Abstract.

3820. Herlitzka, Amadeo. *Fisiología del trabajo humano.* (Physiology of human work.) Buenos Aires: Editorial Americalee, 1945. Pp. 781. Argentinian \$40 (U. S. \$12).—This is a critical summary of some 1,000 investigations, largely by non-American authors, concerned primarily with the fundamental problems of physical activity. Having defined the basic concepts (mechanical and physiological work, caloric equivalent of mechanical energy, work efficiency, etc.), the author discusses the following topics: muscle physiology, including motor innervation and muscle tone; physiology of movement, static and dynamic components of physical work, muscular fatigue; energetic cost of work, including the concept of oxygen debt and the consideration of nutritional factors; functional alterations in the human organism during the course of physical work, with special reference to cardiorespiratory functions, blood chemistry, water exchange, and the less extensively studied effects on the nervous system and special senses; factors which modify the response to physical effort, such as individual differences in work capacity, environmental conditions, and the influence of the work itself; micromotion analysis of movements and physio-

logical aspects of the rationalization of industrial work.—J. Brožek.

3821. Newman, Henry W., & Yee, James. (Stanford U. Med. Sch., San Francisco, Calif.) Effect of electrically induced convulsions on rate of alcohol metabolism in man. *Proc. Soc. exp. Biol.*, N. Y., 1947, 65, 122-123.—Because insulin and certain other substances accelerate alcohol metabolism—a characteristic peculiarly resistant to change—6 patients, suffering from "functional mental disease" and given specified injections of alcohol, were studied before and after electric shock therapy. Blood analyses provide no evidence for alteration in rate of alcohol metabolism consequent to electrically-induced convulsions.—L. A. Pennington.

3822. Overman, R. R., Hill, T. S., & Jost, H. Ionic balance and correlated psycho-physiological measurements in premenstrual tensional states. *Fed. Proc.*, 1947, 6, 174.—Abstract.

3823. Paton, W. D. M., & Sand, A. (National Inst. Medical Research, London, England.) The optimum intrapulmonary pressure in underwater respiration. *J. Physiol.*, 1947, 106, 119-138.—Adult males, ranging in age from 21 to 50 years and including 2 diving instructors, were studied in either supine or vertical body position with regard to the "most comfortable" breathing arrangements when under water. The effects of immersion on vital capacity, energy reserve, respiratory cycle, and upon work are reported along with suggestions for the construction of equipment providing optimal underwater working conditions.—L. A. Pennington.

#### NERVOUS SYSTEM

3824. Adrian, E. D. A class demonstration of the alpha rhythm. *J. Physiol.*, 1947, 106, 16.—Abstract.

3825. Barnes, T. C. Outline of a method of procedure in electroencephalography. *Fed. Proc.*, 1947, 6, 74.—Abstract.

3826. Barnes, T. C. Transient phase boundary potentials which resemble the nerve impulse. *Fed. Proc.*, 1947, 6, 73.—Abstract.

3827. Barnes, T. C., & Beutner, R. On the role of the acetylcholine and esterase during nerve activity. *Fed. Proc.*, 1947, 6, 75.—Abstract.

3828. Barnes, T. Cunliffe, & Fischer, Carl C. Electroneurograms of infants and children with convulsive disorders. *Arch. Pediat.*, 1947, 64, 6-24.—"Thirty-four electroencephalograms were taken on 28 babies, age 8 months to 5 years. . . . Fourteen were suspected epilepsy, 10 had suspected brain injury, 8 were cerebral agenesis cases, 1 was an arrested development at 3 years and 1 was a behavior problem. . . . The fast pentothal waves resemble the fast spindles of waves in normal sleep and in several cases these fast pentothal waves did not develop on damaged brain areas but were present on the normal areas of the cortex. Thus it may be possible to outline areas of a partially damaged brain by means of pentothal. . . . The high voltage fast waves produced by brain trauma are probably po-

tentials produced by excess acetylcholine liberated from crushed brain cells and detected in the spinal fluid in experimental brain injury. The slow pentothal waves may be explained by the finding that the sodium salts of barbiturates are positive at the oil-saline interface and neutralize the negativity of acetylcholine. . . . We begin to understand why cholinergic parasympathetic activity prevents slow waves in hyperventilation and inhibition of parasympathetic activity increases slow waves in deep breathing."—(Courtesy *Child Develpm. Abstr.*)

3829. Darrow, C. W., & Henry, C. E. A basis for interpreting autonomic-EEG relationships. *Fed. Proc.*, 1947, 6, 93.—Abstract.

3830. Dow, Robert S., & Raaf, John E. Electroencephalographic changes in experimental concussion and in acute concussion of human cases. (Monthly progress reports 1-12 and abstract of final report, 1942-1943; Publ. Bd. Nos. M40957-M40958.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 16. \$1.00, microfilm; \$1.00, photostat.—Electroencephalographic studies on 213 patients following head injuries which for the most part were relatively mild showed that those patients who had some impairment of consciousness at the time the record was taken had the most significant deviations from a normal electroencephalograph. There was a better correlation between the clinical symptoms and the physical factors and the duration of illness, than there was between the electroencephalogram and the physical factors and the duration of disability. No particular wave form, frequency, or amplitude was found to be characteristic of the post-concussion state. In the study of dogs, there were marked differences between the effects of equal blows in the anesthetized and unanesthetized animal. Animals anesthetized with barbituric acid derivatives showed the most characteristic electroencephalographic records of trauma. Conditioned reflexes, in dogs, appear to be a more delicate index of cerebral cortical function than is the encephalograph as it is obtained at present. These reports cover work performed under OSRD contract OEMcrm-156.—(Courtesy *Bibl. scient. industr. Rep. U. S. Dep. Commerce*).

3831. Engel, George L., (U. Rochester, N. Y.), Romano, John, & Ferris, Eugene B. Variations in the normal electroencephalogram during a five-year period. *Science*, 1947, 105, 600-601.—Three individuals in the fourth decade of life have been investigated a number of times (25 to 39) over a 5-year period. No changes in the gross appearances of control electroencephalograms of any subject were found during this period. The spread of mean frequency was: subject A, 8.8-9.6 cycles/second, B, 8.3-9.3 cycles/second and C, 8.8-9.3 cycles/second.—*F. A. Mote.*

3832. Forbes, Alexander, & Davis, Hallowell. Electroencephalography of naval aviators, (with supplement by Pauline A. Davis, EEG Analysis of 79 selected C. A. A. subjects, Sept. 1941.) (CAA Div. of Res. Rep. No. 13, 1941; Publ. Bd. No. M50292.) Washington, D. C.: U. S. Dep. Com-

merce, 1947. Pp. 38. \$1.00, microfilm; \$3.00, photostat.—The purpose of this study was to determine the incidence of electroencephalogram patterns among cadets and trained aviators which were definitely suggestive of latent or undetected epilepsy; to define the degree of correlation between lesser degrees of electroencephalographic irregularity and failure in flight training; and to devise a practical empirical method of scoring. Electroencephalograms were taken for nearly 1000 cadets, student officers, and instructors at the Pensacola Naval Air Station. The frequency of the dominant rhythm, unusually prominent episodes, unusual prominence of fast-frequencies, and unusual prominence of slow-frequencies were analyzed by 3 different scoring systems. The electroencephalogram analysis of 79 selected Civil Aeronautics Administration subjects (presented as supplement) was directed at determining the practicality of a 20-minute electroencephalogram measure in selecting military pilots.—(Courtesy *Bibl. scient. industr. Rep. U. S. Dep. Commerce*).

3833. Gallego, A., & Lorente de Nö, R. (Rockefeller Institute, New York.) On the effect of several monovalent ions upon frog nerve. *J. cell. comp. Physiol.*, 1947, 29, 189-206.—The finding that standard concentrations of rubidium, ammonium, caesium, and lithium ions depolarize nerve fibers of the frog is further investigated by using weaker concentrations and by studying the reversibility of depolarization following transfer of the nerve preparation to Ringer's solution. Results show that rubidium and potassium ions are "practically identical" in effect and that ammonium, caesium, and lithium ions "also cause depolarization" which is fully reversible although at different rates for each.—*L. A. Pennington.*

3834. Gray, J. A. B. (National Inst. Medical Research, London, England.) The action of acetylcholine on sensory endings. *J. Physiol.*, 1947, 106, 11-12.—Abstract.

3835. Henry, C. E., & Darrow, C. W. Autonomic factors in the relation of EEG to heart rate. *Fed. Proc.*, 1947, 6, 128.—Abstract.

3836. Kremer, W. F. Blood pressure changes in response to electrical and chemical stimulation of the cerebral cortex. *Fed. Proc.*, 1947, 6, 145.—Abstract.

3837. Lorente de Nö, Rafael. (Rockefeller Institute, New York.) Action potential of the motoneurons of the hypoglossus nucleus. *J. cell. comp. Physiol.*, 1947, 29, 207-287.—The changes in electrical potential, accompanying the activity of the somas of neurons and of the synaptic endings of certain pools of neurons of the central nervous system, are studied by means of the antidromic shock technique applied to motoneurons of the hypoglossus nucleus in the cat and the rabbit. Selected results show that (1) nerve excitations, after conduction in an antidromic direction, penetrate the body and the dendrites (soma) of the motoneurons, (2) the properties of the soma and the axons are different as ad-

judged from differences in action potentials and from the fact that asphyxia and mechanical pressure prevent antidromic activation of the soma. The slower speed of conduction and the smaller wave length (but equal duration) of the disturbance in the soma as contrasted with the axon are considered theoretically, along with other findings.—*L. A. Pennington.*

3838. O'Kelly, L. I. Some limitations of electroencephalography. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 233-237.—". . . the electroencephalograph is a research tool most fruitfully employed at the physiological level. The translation of the information given by the electroencephalograph to the language of behavior would be an extremely difficult task. Behavior at the neurophysiological and at the psychological levels cannot be easily described or explained with the same language tools. The contributions of EEG to the study of behavior will lie in the light they shed on such concepts as "maturation," "resistance to stress," "stability of cortical organization" and other psychophysiological variables."—*C. M. Loulit.*

3839. Tyler, D. B., Goodman, J., & Rothman, T. The effect of mental activity and experimental insomnia on the electrical activity of the brain. *Fed. Proc.*, 1947, 6, 218.—Abstract.

[See also abstracts 3843, 3857, 3891, 3929, 3954, 3981, 4076.]

#### RECEPTIVE AND PERCEPTUAL PROCESSES

3840. Carnes, Edwin H. Kinesthesia in flying. *Contact, Pensacola*, 1947, 6, 201-207.—An account is given of the way in which the aircraft pilot uses kinesthetic cues in flying. Pressure end organs in the skin, fascia, tendon sheaths, periosteum, and walls of the body cavity, proprioceptors in the muscles and tendons, and the semicircular canals and otoliths in the inner ear are shown to be the receptors which are stimulated by changes in the motion or attitude of the aircraft. Kinesthetic cues, although useful, are very misleading unless supported by vision outside the aircraft. Under blind flying conditions the pilot must learn to ignore his kinesthetic sensations and fly entirely by information presented visually on his instruments.—*W. F. Grether.*

3841. Hardy, J. D., Wolff, H. G., & Goodell, H. Intensity discrimination of pain sensation. *Fed. Proc.*, 1947, 6, 122.—Abstract.

3842. Loomba, R. M. (Ramjas Coll., Delhi, India.) Sensation, perception and immediate experience. *Indian J. Psychol.*, 1943, 18, 125-128.—Woodworth's position on the relationship between sensation and perception is representative of a well-established tradition. According to this tradition, perceptions are caused by sensations. The author argues that sensations are hypothetical constructs and, thus, cannot be the cause of anything. Further-

more, sensations actually follow perceptions which, according to the traditional argument would make the cause follow the effect.—*G. A. Kimble.*

3843. Rusinov, V. Painful stimuli in causalgia. *Amer. Rev. Soviet Med.*, 1947, 4, 436-439.—A method is described for the study of action currents of human nerves during painful stimulation. These characteristic potentials were compared to those obtained in individuals suffering from causalgia. The explosion-like type of excitation which was found in the presence of causalgia is "evidently a result of a peculiar intensification of the stimulation due to the local excitation of the damaged portion of the nerve."—*L. C. Mead.*

#### VISION

3844. Brozek, J., Simonson, E., & Keys, A. Changes in visual functions and performance after two hours of intensive inspection work at two foot-candles. *Fed. Proc.*, 1947, 6, 84.—Abstract.

3845. Eames, Thomas H. (560 Pleasant St., Belmont, Mass.) A study of tubular and spiral central fields in hysteria. *Amer. J. Ophthal.*, 1947, 30, 610-611.—9% of 193 unselected school children showed tubular central fields; nearly half of those showing this type of field had some degree of amblyopia.—*D. J. Shaad.*

3846. Granit, R. *Sensory mechanisms of the retina*. London: Oxford University Press, 1947. Pp. 412. 35s.—This book is divided into four sections: (1) 5 chapters dealing with electrical excitation and inhibition in the retina and optic nerve; (2) 6 chapters dealing with the psychological properties of the rods and cones, the intensity and duration of retinal stimuli in dark and light adaptation, and the phenomena of flicker; (3) 5 chapters dealing with the properties of photosensitive substances and the mechanism of excitation; (4) 4 chapters dealing with colour reception. There are two appendices, one dealing with the technique of the electroretinogram, the other with its applications to the human eye.—(Courtesy of *Ophthal. Lit.*).

3847. Halperin, M. H., Niven, J. I., et al. Variations in visual thresholds during carbon monoxide and hypoxic anoxia. *Fed. Proc.*, 1947, 6, 120.—Abstract.

3848. Hartridge, H. Colour-blindness at small visual angles. *J. Physiol.*, 1947, 106, 8.—Abstract.

3849. Hartridge, H. Different fixation points for lights of different colour. *J. Physiol.*, 1947, 106, 8-9.—Abstract.

3850. Hartridge, H. The response of the yellow receptor of the human retina. *J. Physiol.*, 1947, 106, 9-10.—Abstract.

3851. Hartridge, H. (St. Bartholomew's Hosp., London, England.) Some observations on the retinal image of a point source. *J. Physiol.*, 1947, 106, 6-7.—Abstract.

3852. Hartridge, H. The yellow human receptor by another method. *J. Physiol.*, 1947, 106, 10-11.—Abstract.

3853. Harvard University. Psycho-Educational Clinic. Progress report on tests of stereoscopic vision for the selection of range-finder operators. (1942; Publ. Bd. No. 55798). Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 36. \$1.00, microfilm; \$3.00, photostat.—This progress report consists of several individual reports on various phases of the subject. The first report presents an analysis of data obtained on a group of Tufts R.O.T.C. students. All these students were given trials on the Bott test, the Navy trainer, the Tufts trainer, and the Vectographic pursuit apparatus. Tables give results of these tests and correlation figures. A second report presents recommendation as to use of Howard-Dolman apparatus (Armstrong version). A third report presents tabulated data from experiments with 68th Coast Artillery Group. A fourth report presents table giving the correlation between the Wulfeck test and the Vectographic apparatus, and a table giving the Wulfeck reliability of test-retest data for the same group of subjects. Other individual reports present evidence relative to the validity of the Vectographic pursuit apparatus, and data on work at Camp Davis.—(Courtesy of *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3854. Harvard University. Psycho-Educational Clinic. Summary of progress reports on tests of stereoscopic vision for the selection of height-finder operators. (1942; Publ. Bd. No. 55797). Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 10. \$1.00, microfilm; \$1.00, photostat.—The objects of this investigation, which have in large measure been attained, were: (1) to appraise tests of stereo-acuity in current use as to their reliability and their validity; (2) if they were found wanting in these respects, to construct better tests for the selection of height-finder operators; and (3) to develop group methods or tests for the selection of a reliability and validity comparable to the best individual tests which could be devised.—(Courtesy of *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3855. Harvard University. Graduate School of Business Administration. The effect of exercise on stereo and vernier acuity. (1942; Publ. Bd. No. 55804.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 7. \$1.00, microfilm; \$1.00, photostat.—Twenty-four experiments were carried out to determine the effects of exercise on visual acuity. Thirteen of these experiments had to do only with stereo acuity. In the remaining 11 experiments both stereo and vernier judgments were obtained. The stereo and vernier measurements were alternated every ten readings. After a control series had been completed, the subjects were required to pedal a bicycle ergometer adjusted to an eight-pound pull. After this standardized period of work, range estimates were again made. Exercise of this kind and amount did not appear to affect either stereo or vernier acuity.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3856. Harvard University. Graduate School of Business Administration. The effects of hyper-

ventilation on stereo and vernier acuity. (1942; Publ. Bd. No. 55800.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 7. \$1.00, microfilm; \$1.00, photostat.—A total of 15 experiments were completed on five subjects before and after hyperventilation. A marked and consistent increase in variability occurs immediately following the hyperventilation. Without exception, the subjects made poorer as well as more variable judgments if the judgments were made immediately following hyperventilation. Observers sometimes had difficulty in fusing the reticles for 30-45 seconds after hyperventilation. The effects on stereo acuity were more pronounced than they were on vernier acuity. Hyperventilation occurs under emotional stress and also in individuals with unusual respiratory habits, such as deep and shallow breathing.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3857. Harvard University. Graduate School of Business Administration. The effects of metrazol on stereo and vernier acuity. (1942; Publ. Bd. No. 55805.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 7. \$1.00, microfilm; \$1.00, photostat.—Fifty experiments have been carried out on the effects of metrazol on visual acuity. Forty of these experiments were made on stereo acuity. The remaining 12 were made using vernier acuity. The metrazol was administered orally in 1.5 to 7.5 grain dosages. Ingestion of this drug had no significant effect on the variability of stereo or vernier range estimates. The increase or decrease in time necessary to make 40 readings was calculated for stereo acuity. In 100 out of 132 comparisons of time in making the judgments, there was an increase in the speed of range settings after the ingestion of the metrazol without an apparent decrease in precision. Only 5 cases showed a decrease in speed after metrazol ingestion. The average correlation between the mean variation and the time for making judgments was +0.50. This indicates that metrazol, a respiratory and cerebral stimulant, gave rise to both an increase in speed and precision of range estimates.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3858. Harvard University. Graduate School of Business Administration. Low oxygen, low illumination, stereo and vernier acuity. (1942; Publ. Bd. No. 55801.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 8. \$1.00, microfilm; \$1.00, photostat.—The effect of reduced percentages of O<sub>2</sub> in the inspired air has been studied in 22 experiments using 6 subjects. A control experiment was made with normal air, another series with 12% O<sub>2</sub>, and a third with 10% O<sub>2</sub>. In the final series of tests, the illumination was reduced while inhaling 10% concentrations of O<sub>2</sub>. Observations were made relative to both stereo and vernier acuity. Under conditions of normal illumination, the 12% concentrations of O<sub>2</sub> showed practically no effects. When the O<sub>2</sub> was reduced to 10%, however, most of the subjects showed an increase variability in vernier acuity with only slight effects on stereo acuity. Under low

illumination (0.1 f.c.) with 10% O<sub>2</sub> these effects were much more striking, especially the greater variability of vernier compared with stereo acuity. Under the conditions of these experiments, vernier acuity appears to be more susceptible to the impairing effects of O<sub>2</sub> deprivation than stereo acuity.—(Courtesy *Bibl. scient. industr. Rep.*, U. S. Dep. Commerce).

3859. Harvard University. Graduate School of Business Administration. Startle, pupil size, stereo and vernier acuity. (1942; Publ. Bd. No. 55803.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 6. \$1.00, microfilm, \$1.00, photostat.—The variability of range-finding data before and after startle produced by a pistol shot was studied in 5 subjects. In conjunction with these experiments, photographs of the size of the pupil of the eye were taken at regular intervals before and after startle. Thirty-six subjects were used in this phase of the experiment. There was an average increase of 0.3 mm. immediately following the pistol shot. The pupil gradually returned to normal in about 1 minute. It appears, however, that this amount of variation in the size of the pupil has no significance for range-finding data, since there was no change in variability for either stereo or vernier acuity.—(Courtesy *Bibl. scient. industr. Rep.*, U. S. Dep. Commerce).

3860. Harvard University. Howe Laboratory of Ophthalmology. Retention of stereoscopic ability in the absence of practice. (1942; Publ. Bd. No. 55796). Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 11. \$1.00, microfilm; \$1.00, photostat.—Six previously-trained and 21 untrained observers tracked 6 dives, using both make-and-break contact from front to back and continuous-contact methods of operation. The 6 previously trained observers had not operated the simplified stereoscopic trainer described in the appendix. Furthermore they had not employed any stereoscopic training instrument for periods of from approximately 3 to 6 months before the start of the experiment. The average error in seconds of arc with make-and-break contact was 51.5 for the trained and 176.6 for the untrained observers. The average error in seconds of arc with continuous-contact was 65.1 for the trained, and 210.3 for the untrained observers. These differences are significant below the 1% level. Further training on 24 dives did not seriously improve the already trained observers. A series of 6 runs suffices to discriminate between trained and untrained observers, but such a series does not accurately predict the potential stereoscopic ability of the observers, because the correlation between the average of the first 6 runs and the best subsequent set of 12 runs is low if 120 or more runs are given for practice. Once intensive training in stereo ranging has been given, further extensive training to retain ability is not necessary for periods of at least 3 to 6 months.—(Courtesy of *Bibl. scient. industr. Rep.*, U. S. Dep. Commerce).

3861. Lambercier, Marc. (U. Geneva, Switzerland.) La configuration en profondeur dans la constance des grandeurs. (Depth configuration in size constancy.) *Arch. Psychol., Genève*, 1946, 31, 287-324.—The aim of this research problem in the development of perceptions is to examine the interpretations already made, and to contribute to the genetic study of mechanisms dealing with the utilization of different degrees of configuration in the field of depth. After describing the technique of the experiment, with tabulated results, the author concludes that what characterizes adult comparisons is decentralization or the ability to make comparisons at another time and place than in the original situation. The child's comparison is said to assume the character of a "constellation," which is less organized than the adult's multiple configuration. 21 references.—G. E. Bird.

3862. Mandelbaum, Joseph, (Long Island Coll. Med., Brooklyn, N. Y.) & Sloan, Louise L. Peripheral visual acuity; with special reference to scotopic illumination. *Amer. J. Ophthalm.*, 1947, 30, 581-588.—Maximum scotopic acuity is achieved by 4 to 8 degrees eccentric fixation; light intensity is a less critical factor in peripheral acuity than in central acuity; the scotopic visual acuity at lowest levels is nearly constant from 4 to 30 degrees eccentric fixation; peripheral acuity does not parallel the rod population or the light sensitivity of the retina.—D. J. Shaad.

3863. Mitra, S. C., & Datta, Anathnath. Quantitative mental estimate of brightness values. *Indian J. Psychol.*, 1945, 20, 87-90.—Subjects were asked to estimate the percentage of white in a gray disc produced by the mixture on a color wheel of black and white. The relation between the percentage angle of white and the mental estimate of it can be expressed mathematically in the form of a parabola.—G. A. Kimble.

3864. Ohio University. The chromatic dispersion of the human eye and its possible influence on stereoscopic range finding. (1942; Publ. Bd. No. 58177.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 32. \$1.00, microfilm; \$3.00, photostat.—Measurements have been made of the ocular chromatic dispersion for colored targets with a wave length difference of 93 m $\mu$ . The values ranged, for the 13 subjects, from 102.4 sec. to -19.7 sec. Measurements on 2 individuals indicate that the chromatic dispersion may change by as much as 28 sec. when the field brightness is changed to produce a pupil constriction of the order of 1 to 2 mm. This change is probably related to eccentric constriction of the pupil. In a situation designed to simulate the chromatic aspects of haze, constant errors were found, apparently dependent on the color difference of 45 m $\mu$  between target and reticle backgrounds. The values ranged for the same 13 subjects, from 54.8 to -25.8 sec., and correlated fairly well with the measurements of binocular dispersion mentioned above. Finally, calculation of the difference in color of the target and reticle back-

grounds under haze conditions indicates that a color difference as great as that used in the experiment simulating haze effects could be present and that, therefore, the ocular chromatic dispersion might be an important factor in producing constant errors in range finding.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3865. Piaget, Jean, & Lambcier, Marc. (*U. Geneva, Switzerland.*) Transpositions perceptives et transitivité opératoire dans les comparaisons en profondeur. (Perceptual transpositions and logical transference in depth comparisons.) *Arch. Psychol., Genève*, 1946, 31, 325-368.—Topics discussed include relationship of form and size in perceptual activity, the role of the middle term in perceptual transposition and logical transference, configuration of the field of depth, succession of parts perceived at a distance, and evolution of perceptual activity with age. In children, the effect of exercise in developing perceptions increases with age and shows noticeable stability between the ages of 7 and 8. In depth configurations there is reduction in error with age, as perceptual transpositions improve the estimation of size and distance. As logical transference increases possible transpositions, constancy in depth becomes more accurate.—G. E. Bird.

3866. Reimert, L. J. Visual thresholds at low brightnesses. (NDRC Rep. No. 16.5-79, 1943; Pub. Bd. No. 51022). Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 55. \$2.00, microfilm; \$4.00, photostat.—Minimum perceptibility thresholds and visual acuity were determined as a function of brightness over the interval of approximately 0.1 to 30 microlamberts for 4 different colors. This information was desired for use in the design of blackout signs and markers. Sufficient observations were made, with a group of 13 individuals possessing normal daylight vision, to obtain satisfactory averages. The investigation was carried on both in a laboratory dark room, and outdoors at night under various types of natural illumination. Dark room pick-up distances (visibility) are shortest in the red, and are about equal in blue, green, and amber. As the surroundings are illuminated there is a gradual shift in the relative order of visibility; so that outdoors, in the light of a half-moon pick-up is longest in the red and shortest in the blue. At a brightness of 5 microlamberts under the latter conditions the respective pick-up distances in the blue, green, amber, and red, are approximately 0.3, 0.4, 0.45, and 1.7 of those in complete darkness. Approaching the target rapidly, rather than slowly, decreases these distances from 15 to 20%. It is estimated for markers in an unknown location distances would be about 25% less. Unless the brightness is very low or the eccentricity is very high, rectangular markers are equivalent to circular markers of equal area. In complete darkness visual acuity is greatest in the red, and least in the blue. However, at very low brightness, color is not very important. Outdoors, acuity is the same in starlight as in moonlight. Under these conditions, acuity in the red is about

25% higher than in the dark room, but that in the other colors is only slightly improved. The ratio of pick-up distance to recognition distance for luminous letters is least in the red.—(Courtesy of *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3867. Simonson, E., Brozek, J., & Keys, A. Effect of three types of illuminants on visual performance and fatigue. *Fed. Proc.*, 1947, 6, 202.—Abstract.

3868. Simonson, E., Brozek, J., & Keys, A. Visual fatigue. *Fed. Proc.*, 1947, 6, 202.—Abstract.

3869. Sloan, Louise L. (*Johns Hopkins U., Baltimore, Md.*) Rate of dark adaptation and regional threshold gradient of the dark-adapted eye: physiologic and clinical studies. *Amer. J. Ophthal.*, 1947, 30, 705-720.—The range of variation in dark adaptation of normal subjects is compared with that of 5 subjects on low vitamin A diets and with 9 patients having elevated light thresholds which were restored to normal following vitamin therapy. Evidence suggests that riboflavin as well as vitamin A may be required to restore normal thresholds; concentric contraction of the visual field may occur in patients having ocular vitamin A deficiency. 23 references.—D. J. Shaad.

3870. Sloane, Albert E., & Gallagher, J. Roswell. A vision test for pediatrician's use. *J. Pediat.*, 1946, 28, 140-144.—This is a description of a brief method for examining eyes of children, from about the age of 4 through adolescence, who have either diminished visual acuity or a latent refractive error (hypermetropia). The test requires little time and only a small amount of inexpensive equipment, but has to be carefully administered because of its brevity and simplicity.—(Courtesy *Child Devolpm. Abstr.*)

3871. Stromberg, Ann E. (*1201 North Calvert St., Baltimore 2, Md.*) The psychology of the squint. *Amer. J. Ophthal.*, 1947, 30, 601-606.—Psychologic factors which are significant in the success of orthoptic training are emphasized.—D. J. Shaad.

3872. Sulzman, J. H., Cook, E. B., & Bartlett, N. R. The reliability of visual acuity scores yielded by three commercial devices. *J. appl. Psychol.*, 1947, 31, 236-240.—The authors present a summary of an investigation of the reliability of the acuity scales of the Keystone "Telebinocular," the American Optical "Sight-Screener," the Bausch and Lomb "Ortho-Rater," and standard and modified Snellen type letters. Test-retest coefficients indicate that while the 3 instruments have somewhat higher reliability for determining remote acuity than standard Snellen letters, the improved Snellen-type lettering is slightly superior to all other tests used. Standard Snellen-type lettering gave the largest correlation ratios. The conclusion is reached that the lens systems used in the instruments for simulating distance may account for the lower instrument ratios.—H. Hill.

3873. Tufts College. Comparison of men and women subjects on the Tufts stereo-trainer, the

**Navy stereo-trainer, Mark II, and the Bott test of stereo-acuity.** (1942; Publ. Bd. No. 58190). Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 10. \$1.00, microfilm; \$1.00, photostat.—The performance of a group of 56 men and a group of 32 women was measured on the Bott Test of Stereo-acuity, the Navy Stereo-trainer, Mark II, and the Tufts Stereo-trainer. Nine scores are available for each subject from each of 2 testing sessions. The men's means have been compared with the women's means for each of the 9 scores for test 1 and for test 2. The observed differences between these means have been evaluated by means of the t-test. It was found that the performance of women subjects on the Bott Test of Stereo-acuity, the Navy Stereo-trainer, and the Tufts Stereo-trainer is, in general, not significantly different from the performance of the men subjects. Thus it is concluded that sex differences do not affect the efficiency of performance on these tests.—(Courtesy of *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

**3874. Tufts College. Correlation between the Keystone and Bott tests of stereopsis and influence of size of test stimuli in judgments of stereopsis.** (1942; Publ. Bd. No. 58187). Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 8. \$1.00, microfilm; \$1.00, photostat.—A group of approximately 60 college undergraduates who did not wear glasses took the Stereometric Section of the Keystone Diagnostic Series and the Bott Test of Stereo Acuity. The average age was 19.9 years, and average inter-pupillary distance was 63.2 mm. The "number wrong" score and "percent stereopsis" score on the Keystone correlate .824. The "number wrong" Bott correlates .69 with these Keystone scores. A small correlation of -.38 was found between age and Keystone number wrong, showing a slight tendency for older subjects to make fewer errors. Interpupillary distance does not correlate significantly with any of these other 4 measures. Analysis of the Keystone responses shows that the threshold of stereopsis is proportional to the size of the test objects. Smaller decentrations are correctly perceived when the objects are larger. Incorrect responses were predominantly for the largest test objects, almost to the exclusion of other incorrect stimuli. Probably a test of this sort should utilize test stimuli of the same size throughout.—(Courtesy of *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

**3875. Tufts College. Effect of the inter-eyepiece distance setting in the Navy and Tufts trainers on constant error: and an apparatus for the accurate and reliable measurement of inter-eyepiece distance.** (1942; Publ. Bd. No. 58180.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 9. \$1.00, microfilm; \$1.00, photostat.—Experiments on three subjects with the Navy Trainer, Mark II, Model 2, No. 95, and with the Tufts Trainer, in which ranges were taken at a number of I.E.D.'s, show that constant error in the Navy Trainer is a linear function of the intereyepiece distance setting used. An error of 1 millimeter in the setting of the I.E.D. scale

produces a change in constant error of ranges of from 1-2 U.O.E. This effect was not obtained when the experiment was repeated with the Tufts Trainer. It is recommended that the extent of the intereyepiece distance effect described in this report be determined for the real height and range finders. It is recommended that operators be instructed to use the same I.E.D. each time they take ranges. It is further recommended that each operator's I.E.D. be measured by a device incorporating the principles of the apparatus herein described. (Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

**3876. Tufts College. Effect of a two week layoff after training on stereo performance.** (1942; Publ. Bd. No. 58186.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 4. \$1.00, microfilm; \$1.00, photostat.—After a two-week layoff 5 out of 6 subjects showed a statistically significant decrement in consistency of ranging performance. It is the subjective opinion of the experimenters that both the layoff and a decline in motivation were primary causes of this decrement. It is concluded from this experiment that practice periods should occur at less than 2- week intervals, and that morale may affect the efficiency of the rangefinder operator.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

**3877. Tufts College. Intercorrelations between scores on the Tufts stereo-trainer, the Navy stereo-trainer, the Bott test of stereo-acuity, the vectographic pursuit apparatus, the Wulfeck group test of stereo-acuity, and two tests of general intelligence.** (1942; Publ. Bd. No. 58189). Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 29. \$1.00, microfilm; \$2.00, photostat.—This report presents intercorrelations between the results of short tests administered to 56 Naval R.O.T.C. men students and 32 relatively unselected women students at Tufts College. The tests given were: (1) Navy Trainer, Mark II, ranging on a stationary target for 20 trials; (2) Navy Trainer, Mark II, ranging on a moving target for 18 signals of "contact"; (3) Tufts Trainer, ranging on a fixed target for 20 trials; (4) Tufts Trainer, ranging on a moving target for 18 signals of "contact"; and (5) the Bott test of stereo-acuity. Each subject was given all 5 tests at one session and then returned at a later time for a complete re-testing. Scores on the Vectographic Pursuit Apparatus, the Wulfeck Group Test of Stereo-acuity, and two tests of intelligence were obtained for some of the subjects. It is recommended that in selecting screening tests for height-finder operators at least one of the tests should require the subject to adjust a target to stereo-contact with a reticle.—(Courtesy of *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

**3878. Tufts College. Report on constant error and variability in the Tufts trainer as influenced by techniques of bracketing on a stationary target.** (1942; Publ. Bd. No. 58182.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 8. \$1.00, micro-

film; \$1.00, photostat.—This experiment was designed to determine some of the factors involved in the judgment of "contact." Interest was centered primarily in attempting to explain the phenomenon of constant error, the tendency to set contact with the target either in front of or behind the fiducial mark. Since it is possible that a particular variety of bracketing might have an influence on the constant error of the operator, means and standard deviations from several tests obtained in ranging on a stationary target in the Tufts Trainer were compared. It was recommended that height and range-finder operators, after training, be encouraged to set "contact" directly without bracketing. This procedure would cut down on "dead time" without, as results herein indicate, significant loss of precision in setting "contact."—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3879. Tufts College. Reticule design: the circle reticle. (1942; Publ. Bd. No. 58183.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 5. \$1.00, microfilm; \$1.00, photostat.—Experiments on the target position effect in the Tufts Trainer with the outline of a circle subtending 34' as the fiducial mark show that such a reticle helps in some cases to overcome the target position effect when the operator is instructed to range by keeping target in the center of the circle. 6 subjects were given tests consisting of 60 trials with a stationary target. In 20 of these 60 trials the target was placed above the circle; in 20 the target was in the center; and in 20 it was below the circle. The constant error of 2 subjects with the target placed in the middle of the circle was significantly closer to zero than it was with the under-circle or above-circle conditions. One subject had a larger constant error in the middle-of-circle trials than he had in either above-circle or below-circle trials.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3880. Tufts College. Target position effect on constant error in the Tufts trainer and in the Navy trainer, Mark II, model II. (1942; Publ. Bd. No. 58181.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 12. \$1.00, microfilm; \$1.00, photostat.—Six trained subjects were given several tests at different times on the Tufts Trainer and on the Navy Trainer. With the Tufts Trainer significant differences between constant error under the two conditions of target position were obtained in at least 1 test with 5 of the 6 subjects. Two of the subjects exhibited particularly large and significant differences in constant error. With the Navy Trainer, all 6 subjects showed the target position effect on constant error in at least 1 test. Tests were carried out on the Tufts Trainer to determine whether or not these differences were due to the properties of the magnification system, and not primarily to the subject's visual peculiarities. The evidence suggests that the magnification system may have some bearing on the target position effect on the constant error, but that the subject's visual mechanism plays the most important part in its

production.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3881. Tufts College. Test-retest reliability coefficients of the Tufts stereo-trainer, the Navy stereo-trainer, Mark II, and the Bott test of stereo-acuity. (1942; Publ. Bd. No. 58188.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 16. \$1.00, microfilm; \$2.00, photostat.—A group of 56 men and 32 women twice took the Bott Test of Stereo-acuity, and stationary and moving target tests on the Navy Stereo-trainer, Mark II, and on the Tufts Stereo-trainer. Test-retest reliability coefficients were computed. Although there is a tendency for test 2 scores not to differ significantly from test 1 scores, the men improved significantly on test 2 with the Bott Test and Navy Trainer variability scores; whereas the women improved significantly on the Tufts Trainer variability scores. The Bott Test is the most reliable of the 3 test instruments used (.78 for men, .83 for women, .79 for the two groups combined). The reliabilities of the constant error (mean) scores are low (.05-.44 for men, .18-.41 for women, and .08-.42 for the combined groups). Reliability coefficients are larger for variability (*sigma*) scores (.38-.73 for men, .49-.71 for women, .46-.71 for the combined groups). Performance on the Navy Stereo-trainer is less variable than performance on the Tufts Stereo-trainer. There is no external criterion as yet available with which to evaluate either the reliability or validity of the tests herein reported with regard to programs of personnel selection, training, or basic research on stereo-range and height finding.—(Courtesy of *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3882. U. S. National Defense Research Committee. The chromatic dispersion of the human eye and its possible influence on stereoscopic range finding. Report to the services No. 35. (OSRD Rep. No. 923, 1942; Publ. Bd. No. 51005.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 33. \$1.00, microfilm; \$3.00, photostat.—Measurements were made of the ocular chromatic dispersion for colored targets with a wave length difference of 93 mm. The values ranged for the 13 subjects, from 102.4 sec. to -19.7 sec. Measurements on 2 individuals indicate that the chromatic dispersion may change by as much as 28 sec. When the field brightness is changed to produce a pupil constriction of the order of 1 to 2 mm., in a situation designed to simulate the chromatic aspects of haze, constant errors were found, apparently dependent on the color difference of 45 mm. between target and reticle backgrounds. Finally, calculation of the difference in color of the target and reticle backgrounds under haze conditions indicates that a color difference as great as that used in the experiment could be present and that, therefore, the ocular chromatic dispersion might be an important factor in producing constant errors in range finding.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3883. U. S. National Defense Research Committee. The effects of loud sounds on the accuracy of

**azimuth tracking and of stereoscopic range finding.** (Rep. to the Services No. 37; OSRD Rep. No. 1001, 1942; Publ. Bd. No. 51006.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 3. \$1.00, microfilm; \$1.00, photostat.—Experiments reveal that loud sounds (up to 120-130 db.) do not produce a decrement in quality in either azimuth tracking or in stereoscopic rangefinding, within the limits of this experiment. This includes the condition where loud sounds had not been previously experienced and the onset is unexpected. In the case of azimuth tracking, the introduction of a loud sound, after a four-hour tracking period, resulted in improved performance which lasts for the duration of the sound. Return to the presound level of performance is rapid. Observers report that the sound produced muscular tension, but nevertheless was a relief from the monotony and an aid in staying awake.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

**3884. Zaretskaya, P. B.** (*Helmholtz Central Institute of Ophthalmology, Moscow, USSR.*) **The effect of electric stimulation on ocular tension.** *Amer. J. Ophthal.*, 1947, 30, 589-590.—Reduction in tension at the anode in application of a galvanic current was demonstrated.—*D. J. Shaad*.

#### AUDITION

**3885. de Maré, Göran.** **The two-place theory of hearing.** *Acta oto-laryng., Stockh.*, 1946, 34, 437-444.—In contrast to Riedi and Furrer's recently presented two-place theory of hearing (see 20: 3477) that pitch is handled by the inner hair cells and loudness by the outer hair cells, another two-place theory is restated with experimental evidence. Sine wave stimulation of the ear sets up small eddy currents in the cochlea, the place of the eddy current being determined by the frequency of the tonal stimulus. The inner hair cells respond to this steady pressure, and become adapted very rapidly. The outer hair cells respond to phasic stimulation of the sinusoidal variation in pressure, and do not become quickly adapted. This theory is based on observations of Békésy and the author's experiments on the fatigue effect of tones. 17 references.—*W. R. Garner*.

**3886. Diamant, Herman.** (*Karolinska Sjukhuset, Stockholm.*) **Sound location and its determination in connection with some cases of severely impaired function of vestibular labyrinth, but with normal hearing.** *Acta oto-laryng., Stockh.*, 1946, 34, 576-586.—Three cases of serious impairment of vestibular function but with normal hearing are discussed. Tests were made on these patients in which they were required to indicate the source of a sound. No impairment in the sound-locating ability was found, and it is concluded that labyrinth function is of no importance in the location of sound. 18 references.—*W. R. Garner*.

**3887. Goetzinger, Cornelius P.** (*Sch. for Deaf, Berkeley, Calif.*) **A consideration of audiometric curves in relation to intelligibility for speech.** *Amer. Ann. Deaf*, 1947, 92, 238-250.—Beside measuring hearing acuity, an otologist can with the aid of the

audiometer tell whether impairment is conductive, perceptive, mixed, or otosclerotic. Although this is important in determining what can be expected in regard to improved acuity the audiometer is not a good index of intelligibility of speech. Other factors which enter in the understanding of speech are (1) the age at onset of impairment, (2) the qualitative aspect of hearing, (3) ability of inner ear to transmit speech without change of distortion, and (4) condition of Werneicki Area. "Hearing is qualitative as well as quantitative."—*G. I. Corona*.

**3888. Harvard University. Psycho-Acoustic Laboratory.** **The masking of signals by noise.** (OSRD Rep. No. 5387, 1945; Publ. Bd. No. L68916.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 35. \$1.00, microfilm; \$3.00, photostat.—This report, recently released for publication, presents the results of a study of the monaural masking of pure tones by white noise at 8 sensation levels (SL) from 20 to 90 db. The observed values of masking were employed to determine two basic functions: (1) the critical band width of a masking noise, i.e. the ratio, in decibels, between the level of a pure tone and the level per cycle of the noise that is just able to mask the tone; (2) the function relating the amount of masking to the effective level of the masking noise. With the aid of these 2 functions, a set of contours was constructed to represent the masked threshold for pure tones heard monaurally against a background of white noise having an ideal flat spectrum at the ear of the listener. A study was also made of the masking by white noise of speech in the form of continuous discourse. Measurements of the threshold of detectability and of the threshold of intelligibility were made at the same 8 noise levels as were used to mask pure tones. The masking of speech is shown by plotting the speech levels at the thresholds of intelligibility and of detectability as functions of the level of the masking noise. These curves have a shape similar to the curves showing the threshold levels of tones of 500, 1000, and 2000 cps. as a function of the masking noise level. The average threshold of intelligibility for speech in the quiet being 13.5 db above the average threshold of detectability, and the span between the thresholds of detectability and intelligibility at the higher noise levels (50 to 90 db SL) being reduced to 9 db, it is concluded that the recruitment of loudness is of minor or negligible importance in determining the threshold of intelligibility of speech in the presence of masking noise. A description of the test equipment is included.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

**3889. Higgins, Francis C.** (*Sch. for Deaf, Danville, Ky.*) **The education of the deaf—the book mart, being a list of books on the deaf, speech and speech-reading, the language of signs, etc. now in print.** *Amer. Ann. Deaf*, 1947, 92, 151-168.—A list of books, articles, and magazines dealing with the education of the deaf. The list is divided into 16 parts; General, Speech and Speech-Reading, School Books, The Language of Signs, Biographies, Novels, Plays, Canada, England, France, Denmark, South Africa,

Australia, New Zealand, Egypt, Medical Books.—*G. I. Corona.*

3890. Hudgins, C. V., & Ross, D. A. (*Harvard U., Cambridge, Mass.*) The measurement of hearing. *Volta Rev.*, 1947, 49, 128-130; 146; 173-174; 196-198.—The first part of the article is concerned with the intensity of sound and the accepted scale of measuring it. Sound intensity can be expressed by (1) dynes per square centimeter (units of force or pressure) and (2) watts (or units of work). The small fraction of a watt expressed  $10^{-18}$  watts, preferred for purely physical measurements, and the normal threshold of hearing used in physiological, psychological, and clinical work are the 2 standards of reference used in auditory testing. The second part deals with the newer methods for evaluating hearing. Hearing tests are designed to test sensitivity to sound or discrimination of sounds. The pure tone audiometer is a standardized test making possible an analysis of the sensitivity threshold and providing a decibel intensity scale enabling the clinician to determine hearing losses in standard physical units. Audiometer measuring hearing for speech and tests used to determine whether individuals can discriminate between closely similar sound stimuli are discussed.—*G. I. Corona.*

3891. Kellaway, P., & Hoff, H. E. Inhibition in the auditory nerve. *Fed. Proc.*, 1947, 6, 140.—Abstract.

3892. Kristensen, Harald K. (*St. Joseph's Hosp., Odense, Denmark.*) Weaver's deafness. *Acta oto-laryng.*, Stockh., 1946, 34, 157-175.—127 male weavers, normally exposed to a constant loudness of about 90 phons of noise, were given various hearing tests, including audiometer measurements. Hearing decreases with increased chronological age and length of work in the mills, but no case of complete deafness was found. Hearing for whisper is decreased. There was little loss in air or bone conduction for the a<sub>1</sub> tuning fork. The upper frequency limit was not lowered, although a moderate rise in the lower limit was found with some groups.—*W. R. Garner.*

3893. Metz, Otto. The acoustic impedance measured on normal and pathological ears; orientating studies on the applicability of impedance measurement in otological diagnosis. *Acta oto-laryng.*, Stockh., 1946, Suppl. 63. Pp. 254.—After a brief account of some fundamental principles of acoustics, a purely acoustic method of measuring the impedance of the human ear is given. The calibration of the device is explained in some detail, and several sources of error are described. Many measures of the absorption of normal ears were made, and the variability of these measures indicated. Absorption of sound energy in normal ears is decreased when the intra-aural muscles are contracted. Measurements were made on different types of deafened ears, and compared to the normal ear measures. Ears with conductive type deafness show considerably less absorption than do normal ears; ears with perception (nerve) deafness, however, show no change in absorption as compared with normal ears. The use

of acoustic impedance measurements is recommended as a clinical test for types of deafness. 57-item bibliography.—*W. R. Garner.*

3894. Rasmussen, Helmer. (*Sundby Hosp., Copenhagen, Denmark.*) Studies on the effect upon the hearing through air conduction brought about by variations of the pressure in the auditory meatus. *Acta oto-laryng.*, Stockh., 1946, 34, 415-424.—Audiometer tests were conducted on normal Ss under conditions of normal, increased, and decreased air pressure on the auditory meatus. The air pressure was varied by means of a modified Dishoeck pneumophone. At low and middle frequencies, the threshold is increased when the air pressure is greater or less than normal. At frequencies of 8200 and 11,600 cps, however, the threshold is lowered with increased air pressures. Three explanations of the phenomena are discussed. 22 references.—*W. R. Garner.*

3895. Sengupta, N. N. (*Lucknow U., India.*) A psycho-physical interpretation of the sound-experiences associated with the "unrecited mystic syllables." *Indian J. Psychol.*, 1943, 18, 47-49.—The practice of unrecited mystic syllables is peculiar to certain Indian mystic cults. The behavior consists in associating certain syllables with the processes of inspiration and expiration until, through long practice, the recitation of the sounds becomes as automatic as breathing. Many kinds of auditory experience are said to be experienced in the course of such automatic recital. The author interprets these experiences as resulting from the fact external stimuli are inhibited during the recitation of the syllables. This makes it possible for the mystic to pay attention to internal stimuli such as the noise resulting from the circulation of the blood in the middle and inner ears are such as to emphasize certain pitches, with the result that the subjective experience is less noise-like than the characteristics of the stimulus would otherwise produce.—*G. A. Kimble.*

[See also abstracts 3795, 3921, 3935, 3949, 3966, 4097, 4161.]

#### RESPONSE PROCESSES

3896. Adriaanse, A. *Ammophila campestris Latr. und Ammophila adriaansei Wilcke; ein Beitrag zur vergleichenden Verhaltensforschung.* (A. Campestris Latr. and A. Adriaansei Wilcke; a contribution to research in comparative behavior.) *Behaviour*, 1947, 1, 1-34.—The writer reports the results of a comparative study of the behavior of two closely related species of wasps. Since these species were differentiated on relatively superficial morphological characteristics it was of some importance to determine whether or not the morphological differences were accompanied by differences in behavior. After reviewing the literature on behavioral observations of these insects, Adriaanse describes the results of his own field observations, many of which were made with individuals marked for easy identification. He finds constant differences in behavior between the two species in their manner of closing

their nests, in the type of prey they secure, in the duration of the nesting period, and in their manner of providing for their broods. The author concludes that the behavioral differences are as constant as the morphological, and that species can be identified through their behavior as reliably as through their structure. 21 references.—*L. I. O'Kelly.*

3897. Bard, P., Woolsey, C. N., et al. Delimitation of central nervous mechanisms involved in motion sickness. *Fed. Proc.*, 1947, 6, 72.—Abstract.

3898. Barnes, T. C., & Amoroso, M. D. Bio-electrical studies of fatigue; further studies of alleged mental fatigue in students. *Fed. Proc.*, 1947, 6, 75.—Abstract.

3899. Birren, James E. (*Northwestern U., Evanston, Ill.*), & Fisher, M. Bruce. (*Fresno State College, Calif.*) Susceptibility to seasickness: a questionnaire approach. *J. appl. Psychol.*, 1947, 31, 288-297.—One-hundred fifty experienced officers and men of a destroyer escort were administered a questionnaire which had been developed for predicting susceptibility to seasickness. Validity measures were gained by comparing questionnaire results with officer- and self-ratings. About half the men who were rated as being highly susceptible were found in the highest 10% selected by the questionnaire, although greater predictive value would have been obtained if self-judgments had been used throughout. Reliability, as determined through use in a boot camp, is indicated as high.—*H. Hill.*

3900. Bokil, K. (*Calcutta U., India.*) A study of affective reactions to common words. *Indian J. Psychol.*, 1943, 18, 141-142.—Fifty-one common words were used in a word association test on 55 subjects. Results showed that neutral words were reacted to more rapidly than emotional words; the reaction time for unpleasant words was slightly longer than that for pleasant words; the reaction time of married women was the shortest; that for unmarried men, the longest.—*G. A. Kimble.*

3901. Bosch, Raimundo. Temperamento y amor. (Temperament and love.) *Rev. Med. legal Colombia*, 1946, 8, Nos. 45-46, 44-65.—Individual differences in the love-experience are seen conditioned by peculiarity in temperament in this study based on the love-life of literary and musical geniuses.—*F. C. Sumner.*

3902. Bose, Bejoyketu. Theories of sex; Moll: Freud: Bose. *Indian J. Psychol.*, 1945, 20, 43-52.—The theories of sex of Moll, Freud, and Bose are outlined and compared.—*G. A. Kimble.*

3903. Christoffel, Hans. Aktualangst. (Real anxiety.) *Schweiz. Z. Psychol. Anwend.*, 1947, 6, 3-10.—The term "Aktualangst" was first used by Freud in 1895 to denote one of the effects of the thwarted sex drive. The author insists that limitation of the concept to the sex drive is untenable. Of causal importance are the drives to movement. Interesting analogies exist between instinctive fear and fright. The psychophysiology of real fear is still in its infancy.—*K. F. Muensinger.*

3904. Ghosh, G. (*Calcutta U., India.*) A study on Kelly's Constructional Ability Test. *Indian J. Psychol.*, 1945, 20, 96-98.—Kelly believes that his test is different from other performance tests in that it tests for the ability to initiate a problem while other tests measure the ability to handle a problem that is set for the subject. In the present study, 300 boys were given Kelly's test and the cube construction test. The correlation between the two was .81 indicating that the two tests measure essentially the same thing.—*G. A. Kimble.*

3905. Grosch, Daniel S. (*North Carolina St. Coll., Raleigh.*) The importance of antennae in mating reactions of male *Habrobracon*. *J. comp. physiol. Psychol.*, 1947, 40, 23-29.—Male *Habrobracon* (a parasitic wasp) were deprived of their antennae and placed in a vial with virgin females for 24 hour periods. Examination of the sex of offspring served as a positive test of whether or not copulation had taken place, since in these insects daughters are biparental offspring and males are produced parthenogenetically. Comparison of the results showed production of few females in the pairings with antennaeless males. Observation revealed further that this is not due to any relation between the presence of antennae and copulation, but to the lack or sensitivity of the antennae-less males with a resultant inability to find or become attracted to the female. In a control experiment in which the eyes were blackened, the mating reactions of the male were normal. The author concludes that mating in the *Habrobracon* has at least two components, the "mating reaction" and the "copulatory reflex." The former is controlled through the antenna, the latter through the central nervous system.—*L. I. O'Kelly.*

3906. Helmick, J. S., et al. Studies in motion sickness. Series C. (CAA Div. of Res. Rep. No. 66, 1946; Publ. Bd. No. M50337.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 64. \$2.00, microfilm; \$5.00, photostat.—This report consists of four papers: (1) "Circulatory and respiratory responses to cold and to breath holding in individuals susceptible and nonsusceptible to motion sickness." At Wesleyan University the relation of motion sickness susceptibility to the cold pressor test (immersion of hand or foot in ice water) and to the effects of holding the breath for a short period was studied. Reactivity was measured by blood pressure, pulse rate, and breathing changes. (2) "Experimental comparison of various autonomic responses in individuals susceptible and nonsusceptible to motion sickness." 5 susceptibles and 5 non-susceptibles served as subjects on each of 6 days during which their reactions to epinephrine (adrenaline), acetyl-beta-methyl-chlorine (mecholyl), hyperventilation, breath holding, and immersion of the foot in ice water were studied. (3) "A second experimental comparison of autonomic responses in individuals susceptible and nonsusceptible to motion sickness." 11 susceptibles and 12 non-susceptibles served as subjects on each of 2 days during which the

following were studied: Dermographia, cold pressor test, breath-holding test with positive and then negative pressure, reaction to injection of mecholyl, and reaction to tilt on the tilt table. (4) "Studies of somatic, physiological, and psychological correlates of history of motion sickness." This is a brief report of methods and results of early attempts to discover the above correlates. Results on more than 200 variables are presented. (See 21: 3924, 3925.)—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3907. Hicks, Thelma Kaut. When left is right. *Parents' Mag.*, 1942, 21, 34.—An appraisal is made for the parents of left-handed children, first with aids to judge this handedness, and with a view to adjusting the child to the right-handed world. As 2 to 5 children out of every 100 are left-handed, parents are informed about discerning the lateral dominance of their children.—(Courtesy of *J. Speech Disorders*).

3908. Huxtable, Zelma Langdon, White, Miriam Harker, & McCartor, Marjorie Abernethy. A re-performance and re-interpretation of the Arai Experiment in mental fatigue with three subjects. *Psychol. Monogr.*, 1946, 59, No. 5. Pp. 52.—This study of mental fatigue is divided into 3 major sections: the onset of mental fatigue; the transfer of mental fatigue; and the physiological changes involved in continuous mental multiplication. The method employed paralleled that used by Arai. The authors departed from the original procedure in their use of different mental tests and in the addition of physiological tests. The tests used were: Wylie's Opposites, Thorndike Intelligence Examination, Macquarrie Mechanical Ability, Thurstone Psychological Examination. The physiological functions measured were: Metabolic rate, blood changes, urinal changes, respiratory changes, pulse, temperature, and weight. The results of the tests given before and after the 12 hour mental multiplication periods over the 4 day fatigue series were not consistent enough to justify final conclusions. This applies to the results of the mental as well as the physiological tests. The objective results were generally inconclusive despite extensive subjective reports of physical and mental fatigue.—F. J. Kobler.

3909. Larsen, E. M. The effect of the fatigue of static effort and of continued standing upon the point of balance in recumbency. *Fed. Proc.*, 1947, 6, 149.—Abstract.

3910. Larsen, E. M. The effect of the fatigue of static effort upon stance oscillations. *Fed. Proc.*, 1947, 6, 149.—Abstract.

3911. Lund, D. W. Man's tolerance to positive acceleration in different orientations of the body. *Fed. Proc.*, 1947, 6, 156.—Abstract.

3912. Maier, Norman R. F. (U. Michigan, Ann Arbor.) Feldman, Robert S., & Longhurst, Joan U. Studies of abnormal behavior in the rat. XX. Change in seizure patterns with repeated testing. *J. comp. physiol. Psychol.*, 1947, 40, 73-86.—Using 2 groups of rats selected by the split litter technique,

the authors studied the effect of daily and weekly exposures to 2-minute periods of auditory stimulation (key-jingling) on the type of convulsive seizure developed. 4 types of seizure were distinguished: (1) questionable or abortive running seizure; (2) running seizure persisting for more than 2 seconds; (3) running seizure followed by convulsion with clonic activity of the whole body; (4) running seizure followed by convulsion involving a more or less isolated fore-paw clonic phase. One group of animals was tested daily for 135 days, the other weekly for 19 weeks. Examination of the data showed sufficient consistency in susceptibility of animals in both groups to warrant the conclusion that determination of proneness to seizures may be made with as few as 7 exposures to the test stimulus. Daily testing produced a decrease in the total frequency of seizures, both for the entire period and for the first 19 trials. The decrease was chiefly in the milder type of seizures described as (1) and (2) above. With increased number of exposures to the situation there was a trend away from the generalized seizures, type (3) to the more localized patterns of type (4).—L. I. O'Kelly.

3913. Naidu, P. S. A note on the James-Lange theory of emotions. *Indian J. Psychol.*, 1945, 20, 69-72.—"A student of modern psychology would wonder why such a psychological absurdity as the James-Lange Theory of Emotions is being permitted still to figure prominently in the pages of our textbooks." In his theory James shows an unmistakable leaning toward mechanistic behaviorism. The order of events postulated by the theory is wrong, as is James' notion that the events early in the sequence are purely biological.—G. A. Kimble.

3914. Schneider, Ernst. Hemmung und Verdrängung. (Inhibition and repression.) *Schweiz. Z. Psychol. Anwend.*, 1947, 6, 54-63.—Psychoanalytic research has placed the concept of repression in the center of its investigation. The author attempts to show that repression is a phenomenon of general significance which can be observed as an inhibition of certain possible activities and experiences in order to bring about an orderly course of events. This is demonstrated in the inhibition of perceptual recall, in childhood amnesia, in the determination of organic forms, and in human development. Repression inhibits unresolved personal conflicts; inhibition is a general regulatory activity of living organisms.—K. F. Muesinger.

3915. Seashore, Harold G. (Psychological Corporation, New York.) The improvement of performance on the Minnesota Rate of Manipulation Test when bonuses are given. *J. appl. Psychol.*, 1947, 31, 254-259.—Maintaining that optimum appraisal of motor ability entails the measurement and adequate rating of the individual's present performance, rate of learning, and motivation, a pilot experiment measuring these factors was run with 7 subjects using the Placing Test of the MRMT. Although the general ranking trend was maintained, only 3 of the 7 initial ranks were the same in the final

scoring. Improvements up to 25% were made, subjects scoring low on initial performance tended to make the greatest gains, and adequate motivation appeared to be extremely important.—*H. Hill.*

3916. Seashore, Harold G. (*Psychological Corporation, New York.*) The superiority of college students on the Minnesota Rate of Manipulation Test. *J. appl. Psychol.*, 1947, 31, 249-253.—According to Ziegler's norms given in the first manual, 100 Springfield College men rated very high. To check on these high scores the test was given to Maine University men. Means and SD's for the two groups of college men were found to be almost identical. Although social competition would not seem to account for the superiority of this group of men over the norm groups, generally heightened motivation might. Scholastic aptitude appeared unrelated to MRMT performance.—*H. Hill.*

3917. Stehle, Hell. Über das Lampenfieber. (Stage fright.) *Schweiz. Z. Psychol. Anwend.*, 1947, 6, 63-69.—The stage fright of actors is rooted in the relation of the artist to the public of which he is in need, which he tries to bring under his spell, which he despises, and at whose mercy he is. A mood of high-hearted conflict and feelings of satiation and disgust are essential components of stage fright.—*K. F. Muensinger.*

3918. Sullivan, C. M., & Fisher, K. C. Temperature selection and the effects of light and temperature on movements in fish. *Fed. Proc.*, 1947, 6, 213.—Abstract.

3919. Tinbergen, N., & van Iersel, J. J. A. (*Zoological Laboratory, Leiden, Netherlands.*) "Displacement reactions" in the three-spined stickleback. *Behaviour*, 1947, 1, 56-63.—Several observers have noted that irrelevant behavior occurs when animals are prevented from expressing powerful urges in the appropriate manner. "The animal, under such conditions, does not suspend action, but vents its urge in movements belonging to another drive." This phenomenon has been termed *Übersprungbewegung* in German, and "displacement reaction" in English. The writers review previous work on the topic and describe new observations on the displacement reactions which occur when the fighting and mating urges of the stickleback are frustrated. Where the territories of two males meet, the male chasing the other stops at the boundary and assumes a head-downwards vertical position and goes through the motions of picking something from the bottom of the tank. Investigation showed this behavior to be patterned after the digging behavior normally a part of nest-building. Similar displaced reactions occur when the mating urge is obstructed. In this situation the male pushes his snout into the nest, makes fanning movements usually found only in connection with the care of eggs and glues kidney secretions to the nest as in the original nest-construction. The writers suggest the hypothesis that these displaced reactions, although originally without value, acquire a secondary function of serving as a signal or a release. "Displacement

reactions with signal function are ritualized, those without signal function are not."—*L. I. O'Kelly.*

3920. Tschirgi, R. D. Further analysis of the grasp reflex. *Fed. Proc.*, 1947, 6, 217.—Abstract.

3921. Tufts College. Bell pacing on a moving target. (1942; Publ. Bd. No. 58185.) Washington, D. C.: U. S. Dep Commerce, 1947. Pp. 35. \$1.00, microfilm; \$3.00, photostat.—Experiments were conducted with two groups of male subjects, using the Tufts Trainer. Each subject was instructed to maintain true range at all times, regardless of other variations in procedure. Group I was composed of 5 subjects (ages 16 to 18) who made 6 five-minute runs per session for 6 sessions. A bell sounded every 10 seconds and they signalled contact as soon afterwards as they were sure they had true range. Group II (composed of 6 college students) made 30 runs of 90 seconds duration at each of 15 sessions. In some sessions no bell was used, whereas in others the time interval between bells was either 10, 5, or 3.3 seconds. A graphic record was obtained for all runs. The average setting and standard deviation were determined from measurements taken at 10 second intervals and these "samples" of settings were compared with the same measures for the readings at contact. It was recommended that in those branches of the service where the data from the heightfinder and rangefinder are taken periodically, a periodic signal be administered to the operator as a signal to make a contact reading.—(Courtesy *Bibl. scient. industr. Rep.*, U. S. Dep. Commerce).

3922. Tyler, D. B. The effect of benzedrine and certain barbiturates during prolonged wakefulness. *Fed. Proc.*, 1947, 6, 218.—Abstract.

3923. Tyler, D. B. The fatigue of prolonged wakefulness. *Fed. Proc.*, 1947, 6, 218.—Abstract.

3924. Wendt, G. R., & Lindsley, D. B. Studies in motion sickness. Series A. (CAA Div. of Res. Rep. No. 40, 1944; Publ. Bd. No. M50313.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 44. \$1.00, microfilm; \$3.00, photostat.—This material consists of 2 reports and a note on research. (1) "A study of the subjective effects of small doses of benzedrine sulfate on individuals susceptible and those non-susceptible to motion sickness, including observations on psychogenic symptoms." The obtained results are of interest as indicating the existence of a difference between susceptibles and non-susceptibles, even though the identification of the nature of the behavior in which they differ is not certain. (2) "An investigation into the relationship of the electroencephalogram to motion sickness susceptibility." Susceptibility to sickness from motion is not accompanied characteristically by a deviant condition of high nervous activity as represented by the electroencephalogram. (3) "A note on an unsuccessful effort to investigate the effects of temperature on vestibularly induced nausea." One group of subjects was subjected to a modified form of the Dorcus tilting procedure at a room temperature of 70° F. The other was subjected to the same procedure at a room temperature of 90° F. The

ear canal of the subjects was irrigated with ice water.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3925. Wendt, G. R., & Tuttle, A. D. Studies in motion sickness. Series B. (CAA Div. of Res. Rep. No. 60, 1946; Publ. Bd. No. M50331.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 78. \$2.00, microfilm; \$6.00, photostat.—This is the continuation of work reported earlier (see 21: 3924) and consists of 3 papers: (1) "Frequency of susceptibility to motion sickness among young adults." A series of questionnaire surveys was made with 7 groups of college students and a group of airline stewardesses. The results have been presented for normative purposes. Questions concerning susceptibility at various age levels showed the greatest frequency at the grade school ages. Women reported more motion sickness than men. (2) "Airsickness among 189 airline stewardesses and its relationship to previous history of motion sickness." The frequency of airsickness was: 42% had vomited from airsickness, 36% had experienced lesser degrees of sickness, 22% had been completely free of sickness. History of sickness on other devices yields some useful prediction of airsickness. (3) "Airsickness among 71 student pilots and 15 instructors and its relationship to previous history of motion sickness." The percentage frequency of airsickness was: Vomiting, students 16%, instructors 20%, lesser sickness, students 52%, instructors 67%; not sick students 32%, instructors 13%. The correlation of motion sickness-inventory score and airsickness category was 0.73 in the case of student pilots and 0.34 in the case of instructors.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3926. Young, Paul Thomas. (*U. Illinois, Urbana.*) Studies of food preference, appetite and dietary habit. VII. Palatability in relation to learning and performance. *J. comp. physiol. Psychol.*, 1947, 40, 37-72.—In the present experiment the writer has studied speed of running and preference reactions in white rats, controlling the learning factor in both situations. The test foods were sugar, wheat, and casein; the first 2 being foods toward which rats show high preference, the last being of low preference. The experimental design included rotation of the incentives in both the simple (single food) tests and in the preference test between combinations of any 2 of the foods. The apparatus used consisted of starting box and food compartment. The animals were under approximately 12 hour deprivation, and were run in a series of 30-trial tests which were so arranged that each animal's performance was measured under each incentive condition. The results for the situation with a single incentive indicated a high degree of relationship between rate of running and palatability of the food. When rate of running is equalized for all situations by assuming time scores equal to unity, the animals appeared to improve with practice at about the same rate for all foods. "This finding is interpreted to mean that the palatability effect is not a determinant of learning as such

but rather a determinant of performance. The results fail to support the law of effect as a law of learning." The percentage of preference for foods was found to be related directly to the difference in palatability between any 2 of the test-foods. A high degree of stability in food preference was observed.—L. I. O'Kelly.

[See also abstracts 3786, 3855, 3878.]

#### COMPLEX PROCESSES AND ORGANIZATIONS

3927. Jolowicz, Ernst. Consciousness in dream and in hypnotic state. *Amer. J. Psychother.*, 1947, 1, 2-24.—The problem of consciousness is basic to all psychotherapy as well as to philosophy. Although Freud has written extensively on consciousness and its variations, the clearest conception has been stated by the philosopher Hans Driesch, who identifies consciousness with the "I" in the formula "I know something." It is necessary to distinguish between the noun, "consciousness" (which is invariable and appears always in the same form and intensity), and the adjective, "conscious" (which has several shades or degrees). A study of borderline mental states may contribute to a clarification of the concept of consciousness and its related concepts. Examples are given of the distinction between consciousness and conscious content in hypnotic states and in dreams. Certain practical conclusions respecting therapy emerge from this theoretical analysis. Discussion.—E. M. L. Burchard.

#### LEARNING AND MEMORY

3928. Allen, W. F. Bark used for the response in a positive conditioned reflex. *Fed. Proc.*, 1947, 6, 69.—Abstract.

3929. Allen, W. F. Effect of three bilateral cerebral lesions on cutaneous conditioned differential responses of the dog's foreleg. *Fed. Proc.*, 1947, 6, 69.—Abstract.

3930. Bagh, Dhanapati. (*Calcutta U., India.*) Memory span. *Indian J. Psychol.*, 1943, 18, 143-145.—Grade school and high school students were tested on memory span for discrete words and memory span for sentences. The correlation between the two types of memory was found to be .31. Superior students had greater memory spans than inferior students. At every age level girls were superior to the boys.—G. A. Kimble.

3931. Blodgett, Hugh C., & McCutchan, Kenneth. (*U. Texas, Austin.*) Kalish's report on the non-correction method and the delayed response problem: a correction. *J. comp. physiol. Psychol.*, 1947, 40, 13.—The writers take exception to a statement by D. Kalish in a recent article on delayed responses in rats "that rats could not learn to make spatially opposed responses at the same place unless, as in a discrimination problem, there were differential cues at that place which would indicate on each trial which of the two responses was required." Blodgett and McCutchan disclaim making an abso-

lute statement that rats cannot learn such problems, referring to their own studies in which some animals showed definite evidence of such learning, and to a statement from one of their papers, in which they have said: "these experiments . . . seem to demonstrate the extreme difficulty of even the simplest double-pattern maze when the critical choice point is in a fixed position, or when . . . the visual situation is constant despite maze rotation."—*L. I. O'Kelly.*

3932. Bose, S. K. (*Calcutta U., India.*) "Attention" effect on 'R' between initial score and gain with practice. *Indian J. Psychol.*, 1943, 18, 57-58.—Six subjects were given 5 continuous 1 minute trials on 5 forms of cancellation and continuous multiplication tests. Results indicate a tendency for the S.D. of the scores to increase with practice.—*G. A. Kimble.*

3933. Bromiley, R. B. Conditioned responses in a decorticate dog. *Fed. Proc.*, 1947, 6, 83.—Abstract.

3934. Bromiley, R. B. Relation of areas of cortical ablation to the leg responding to a conditioned stimulus. *Fed. Proc.*, 1947, 6, 83.—Abstract.

3935. von Haartman, Lars. (*U. Helsingfors, Finland.*) Eine Methode zum vergleichenden Studium der optischen Wahrnehmungsfähigkeit höherer Tiere. (A method for the comparative study of the optical perceptive capacity of higher animals.) *Behaviour*, 1947, 1, 35-55.—An experiment is reported in which the Yerkes multiple choice technique was adapted to testing small birds. After reviewing the previous studies which have demonstrated the great difficulty of multiple choice learning in higher animals he cites some studies which have reported comparatively rapid learning of such problems by birds. Using two pairs of *Muscicapa hypoleuca*, one pair of *Parus major*, one *Alauda arvensis* and two *Pyrrhula pyrrhula*, and nests constructed in an apparatus which allowed variation of the position of the correct nest, problems such as "second from the right," or "third from above" were presented to the subjects under controlled conditions. All problems were mastered with above-chance accuracy in from 40 to 200 trials by all the birds. Changes in the dimensions of the apparatus had no effect on the performance. The author discusses the question of why birds have learned so easily problems which are difficult even for primates. He suggests that solution of the multiple choice problems depends to a great extent upon perception, and that manipulation is of lesser importance. He infers that the "good Gestalten" of the higher animals may be, in some situations, an interference factor. 21 references.—*L. I. O'Kelly.*

3936. Harvard University. Howe Laboratory of Ophthalmology. An investigation of the amount of practice advisable in ranging on a simulated-diving-aeroplane target. (1942; Pub. Bd. No. 55793.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 14. \$1.00, microfilm; \$1.00, photostat.—While training 11 observers on a simplified multi-course

stereoscopic trainer, improvement in continuous-contact performance significant at the 1% level was observed after an average of 165 courses had been ranged. Improvement in make-and-break-contact performance was observed after an average of 141 courses had been ranged. The apparatus employed in obtaining these results was the simplified trainer described in the appendix.—(Courtesy of *Bibl. scient. industr. Rep.*, U. S. Dep. Commerce).

3937. Horowitz, Milton W., & Stone, Calvin P. (*Stanford U., Calif.*) The disorganizing effects of electro-convulsive shocks on a light discrimination habit in albino rats. *J. comp. physiol. Psychol.*, 1947, 40, 15-21.—The purpose of this experiment was to determine the effect of electro-convulsive shock on a serial light discrimination habit and on the learning of an interference habit. 13 female rats composed the shock group, and 10 rats, half males and half females, the control group. Using a 23-hour hunger motivation, the animals were trained on a Stone light discrimination apparatus, and upon mastery of the discrimination the experimental group was given 15 daily convulsive shocks. After the shock period 10 daily trials were continued with "pseudo-shock" in which the manipulative procedure for shock was followed but no shock administered. The control group received "pseudo-shock" for the entire shock and post-shock period of the experimental group. Learning on the interference habit, which consisted of a reversal of the correct response from light to dark, was then initiated. The results indicated that electro-shock produced a statistically significant disorganization of performance, but that after shock was discontinued a steady improvement ensued. The control group was superior to the shock group in mastering the interference habit, the difference being significant if a relatively lenient criterion of mastery (3 perfect runs in 4 trials) was used.—*L. I. O'Kelly.*

3938. Kapat, Guar Baran. (*Calcutta U., India.*) Memory and school progress. *Indian J. Psychol.*, 1943, 18, 138-140.—Several kinds of material were used in an investigation of the relationship between memory and school success. A tendency was discovered for memory ability to increase both with age and school grade. This tendency was most marked for meaningful materials. There was a significant correlation between logical memory and school work ( $r = .41$ ). The correlation between school work and memory for nonsense syllables was .22; that between school work and digit memory, .06.—*G. A. Kimble.*

3939. McGinnies, Elliott. (*Harvard U., Cambridge, Mass.*) Change in the performance of albino rats subjected to electroshock convulsions. *J. comp. physiol. Psychol.*, 1947, 40, 31-36.—Using a 14 unit elevated maze, the writer trained 20 animals to a criterion of 3 successive errorless trials under hunger motivation. Following achievement of the criterion and 4 days of over-learning the animals were subjected to daily electroshock convulsions over a period of 23 days, each day of which they also

were run in the maze. 7 further runs were made after the cessation of the convulsion schedule. Results indicate no increase in error scores, but a marked increase in average time scores. The time scores showed, however, great individual differences between animals, some rats showing almost no effect of the convulsions on either time or error scores. On the trials following the shock series the average running time returned to pre-shock levels. The writer offers the hypothesis that electroshock acts upon individual differences in ability to withstand the physiological stress of the convulsions rather than through any direct neural effect of the current. Such an hypothesis accounts for the lack of change in error scores and the large effect on running performance.—*L. I. O'Kelly.*

3940. Otterback, V. L., & Gantt, W. H. Latent period as an index of intensity of the conditioned reflex. *Fed. Proc.*, 1947, 6, 173.—Abstract.

3941. Riess, Bernard F. (*Hunter Coll., New York.*) Some effects of adrenal cortical steroid hormones on the maze behavior of the rat. *J. comp. physiol. Psychol.*, 1947, 40, 9-11.—In a previous study the writer demonstrated an impairment of maze learning ability in rats treated with insulin. Since the steroid extracts of the adrenal cortex are to be considered as insulin antagonists in their action on blood glucose it was thought they might also produce an acceleration of the learning process. The effect of intramuscular injections of adrenal cortical extracts on time and error scores of rats was tested. 40 male albino rats 5 months of age were run on a linear, 6-unit Warden-Warner tunnel maze for a period of 30 days, under 23-hour hunger motivation. During this time they received the medication in daily injections of 40 rat units. A comparable control group was used. Results indicate the experimental group to have fewer errors (difference significant at the 2% level) and lower time scores (significant at 10% level). Measures of body temperature of the two groups showed a significant increase of temperature in the experimental group.—*L. I. O'Kelly.*

3942. Tucker, A. C. The objective measurement of flying skill. In *Kelly, G. A., New methods in applied psychology*, (see 21: 4140), 1947. Pp. 33-37.—As an exploratory attempt to evaluate flying skill a series of maneuvers were described and used as "test-items" for instructors to mark. The test-retest reliabilities were low (of the order of .20), as were validities calculated from scores made after increased number of flying hours. Suggestions are made for further research.—*C. M. Louitt.*

3943. Tufts College. Knowledge of results training in ranging on a moving target. (1942; *Publ. Bd. No. 58184.*) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 8. \$1.00, microfilm; \$1.00, photostat.—The results of experiments with 6 college students indicate: (1) that the type of knowledge of results training given here will reduce constant error and variability in ranging; (2) that the permanent benefit of KR signal (buzzer signal)

training varies with the individual's capacity for becoming a "good" operator; (3) that the measured effect of KR training is dissipated to some extent in further trials without KR buzzer for 5 out of the 6 subjects; and (4) that the "level of interest" or motivation of the subject for range finder operation is an important determiner of the effect of KR training.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

3944. Wapner, Seymour, et al. Comparison of student pilot performance on successive check flights, as measured by photographic records. (*CAA Div. of Res. Rep. No. 59, 1946; Publ. Bd. No. 50330.*) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 119. \$3.00, microfilm; \$8.00, photostat.—Photographic records of a special instrument panel were obtained while student pilots with approximately 35 hours of training executed 2 successive check flights. Records of 16 maneuvers in each flight were analyzed during slow-motion projection, and readings of specific aspects of performance were recorded on check sheets. Readings were obtained on average airspeed, revolutions per minute, air speed variation, average bank, altitude gain or loss, altitude variation, maximum rate of climb, and ball bank deviations. The records were analyzed to assess the consistency of student pilot performance in successive check flights, and the degree to which improvement or lack of improvement occurred from first to second flights. Appendices present the following: (1) Manual for use of check sheets in recording data from photographic records of flight performance; (2) reliability of check sheet entries; (3) tables showing differences between planes; (4) tables showing differences between swings 1 and 2 and swings 3 and 4; and (5) tables showing difference between flights.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

#### THINKING AND IMAGINATION

3945. Bose, S. K. (*Calcutta U., India.*) Symbolic forms of language in physical and mental sciences. *Indian J. Psychol.*, 1943, 18, 117-124.—Three kinds of language symbols are identified. They are classified as extrinsic or arbitrary, intrinsic or descriptive, and insight or interpretative. It is commonly agreed that poetry and religion make use of all three types of symbol. The question of the kinds of symbol used by science leads to a diversity of opinion. The author believes that the physical and mathematical sciences use the first two types, and that only the biological sciences including psychology use the intuitive type.—*G. A. Kimble.*

3946. Fischelli, V. R., & Welch, L. (*Hunter Coll., New York.*) The ability of college art majors to recombine ideas in creative thinking. *J. appl. Psychol.*, 1947, 31, 278-282.—Recombining of ideas in creative thinking according to 4 different plans was employed to compare the abilities of college art majors, professional artists, and unselected college students. For areas tested in this study, mean scores show that a statistically significant difference

did not exist between professional artists and art majors, but that it did exist between both of these groups and the unselected group. Except in the field of art no consistent differences were found between the groups.—*H. Hill.*

3947. Raju, P. T. (*Andhra U., Guntur, India.*) The direction of universalisation. *Indian J. Psychol.*, 1943, 18, 81-96.—Universalization for the author means the same thing as concept formation. A distinction is made between empirical and non-empirical universals, the latter but not the former being a product of the mind. The author discards the notion of innately given concepts and criticizes the points of view of several earlier authors. According to the author's own formulation, the first experience of an object, for example a cube, gives rise to a definite sensory image which may be equated with the concept. As more and more objects of the same category are experienced, a confusion of images results which is removed only when a non-sensory concept is formed. In thoughtful people this non-sensory concept may be formed after only one experience with an object of the category involved.—*G. A. Kimble.*

#### INTELLIGENCE

3948. Dobzhansky, Th., (*Columbia U., New York*), & Montagu, M. F. Ashley. Natural selection and the mental capacities of mankind. *Science*, 1947, 105, 587-590.—Developed in this paper is the thesis that man lives in a complex, dynamic social environment, the rapid changes in which require that the organisms responding to it must exhibit marked adaptability. One of the chief characteristics which man inherits is his capacity to adjust. The hypothesis is put forth that educability is a species characteristic of man and that natural selection has operated to favor genotypes which permit greater and greater educability and plasticity of mental traits.—*F. A. Mote.*

3949. Johnson, Elizabeth Hughes. (*Sch. for the Deaf, Jacksonville, Ill.*) The effect of academic level on scores from the Chicago Non-Verbal Examination for primary pupils. *Amer. Ann. Deaf*, 1947, 92, 227-233.—The Chicago Non-Verbal Examination was administered in pantomime to grades 3-9 at the Illinois School for the Deaf to determine whether it was a valid instrument of measuring intelligence for these children. In comparing the scores of the preparatory grades 2 and 3 and grades 1-3 inclusive a gradual increase with each succeeding grade was noted. This would seem to indicate that the lower limit of the test is determined by the academic and verbal level of the congenitally deaf child instead of the chronological age of 7 or 8. When compared with the results of the Arthur Point Scale the Chicago Non-Verbal under-rated the children below the 2nd grade; however it apparently is valid for deaf children who have attained at least a 2nd or 3rd grade academic level.—*G. I. Corona.*

3950. Martin, Florence. Comparative study of intelligence of children from private homes and

those from an institutional home. *Peabody J. Educ.* 1947, 24, 198-202.—The purpose was to ascertain differences among children under the 2 types of home life. Included were 65 children in institution and 65 selected from 567 in private homes in Lexington, Kentucky, distributed through kindergarten to sixth grade. The Binet-Simon Intelligence Test was used. At all levels, the average I.Q. of children from private homes was higher than I.Q. of children from the institution, with a difference of mean I.Q. in favor of the private home child of 17.—(Courtesy *Child Developm. Abstr.*)

3951. Mohsin, S. M. Spearman's tetrad difference criterion and the group factors. *Indian J. Psychol.*, 1943, 18, 97-105.—Spearman's two factor theory is outlined briefly in terms of the observations which led to its formulation. Results of the present investigation indicate that the tetrad difference criterion is not satisfied when an overlapping factor is introduced into a set of intercorrelated test scores. When this factor is removed, the equation appears to be satisfied.—*G. A. Kimble.*

#### PERSONALITY

3952. Asthana, H. S. (*Lucknow U., India.*) Psychoneurotic tendencies in university students. *Indian J. Psychol.*, 1945, 20, 94-96.—Thirty undergraduate students were tested on Cattell's neuroticism inventory. Neurotic tendencies were found to occur with the greatest frequency in the obsessive-compulsive area.—*G. A. Kimble.*

3953. Atreya, B. L. (*Hindu U., Benares, India.*) Supernormal factors in human personality. *Indian J. Psychol.*, 1943, 18, 1-10.—Scientists are generally concerned with problems that are definite and concrete, avoiding phenomena that are less tangible. This is partly because investigators who study the latter type of phenomena are frequently charged with charlatanism. The author, however, feels that, even when allowance is made for deliberate and unintentional fraud, there is still evidence for the existence of supernormal phenomena including telekinesis, apparitions, supernormal cognitions, and reminiscence of past lives. Some very brief case material is advanced to support the author's view. On the basis of this belief, it is argued that the study of supernormal phenomena should constitute a major portion of psychological research, and that the results of such research may produce a real change in our conception of human nature.—*G. A. Kimble.*

3954. Barnes, T. C., & Amoroso, M. D. Electroencephalograms correlated with scores of the Bell adjustment inventory for personality. *Fed. Proc.*, 1947, 6, 75.—Abstract.

3955. Fodor, Nandor. Motives in the trauma of weaning. *Amer. J. Psychother.*, 1947, 1, 155-160.—In the womb the infant is the center of the universe and this illusion may be partially maintained after birth by physical closeness to the mother. Only gradually does the child realize that his mother's

body is separate from his own. This realization is accomplished through a psychic revolution accompanied by pain and renunciation. Beginning with weaning from the maternal body in birth, life is a succession of weanings from dearly cherished conditions. Psychically, each such weaning is a fateful step. Breast weaning is a critical period at which the psychic future of the child is determined. Cruel or abrupt weaning may mobilize the panicky, inarticulate emotions of birth and lay the foundation for a neurotic life. Hunger for the breast may persist into mature life and lead to fantasies, fetishism, and compulsions. Illustrative cases are cited.—E. M. L. Burchard.

3956. Jung, F. T., & Cisler, L. E. The relation of a measurement of enthusiasm-staleness to measurements of physical fitness, for medical students under the accelerated program. *Fed. Proc.*, 1947, 6, 139.—Abstract.

3957. Llinás, Pablo A. La personalidad psíquica del Libertador Simón Bolívar. (The psychic personality of the Liberator Simon Bolívar.) *Rev. Med. legal Colombia*, 1946, 8, Nos. 45-46, 33-43.—The author criticizes on two scores biotypological diagnoses of Simon Bolívar as a hypomanic and hyperthyroid made by the academicians, Luis López de Mesa and Edmundo Rico. In the first place, an exact clinical history of this historical personage being unavailable, studies such as these must fall back on constructing a clinical history out of diverse and sundry allegations. In the second place, "it is not possible, then, that a person is tall and short, lean and fat, and for the same reason, no one can be, at the same time, hyperthyroid and hypomanic." The author believes that personality studies of Bolívar should restrict themselves to the latter's emotional reactions under such and such conditions. —F. C. Sumner.

[See also abstracts 3860, 3961, 3965, 4163, 4178.]

#### DEVELOPMENTAL PSYCHOLOGY

3958. Rose, Dorian. (U. California, Berkeley.) Comparisons of fetal development in normal and hyperthyroid rats. *J. comp. physiol. Psychol.*, 1947, 40, 87-105.—The problem of this experiment was to ascertain the effect of maternal hyperthyroidism on the developmental schedule of her fetal offspring. Using the Carmichael technique, fetuses were examined at each day-age from 16 to 21 days. Systematic stimulation of 15 points on various parts of the body of fetuses from hyperthyroid and normal control animals indicated a slight intensity difference in some movement patterns in the experimental group. The findings support the conclusion that "generalized movements were observed before specific movements; specific movements 'individuated' from the generalized ones." 30 references.—L. I. O'Kelly.

#### CHILDHOOD AND ADOLESCENCE

3959. Benner, Lorraine W. Finding out about children through facts and fiction. *Childh. Educ.*,

1946, 23, 85-86.—This is a bibliography of books and pamphlets on how to study children.—(Courtesy *Child Developm. Abstr.*)

3960. Biggar, Jean. Freud's contribution towards the understanding of children. *Indian J. Psychol.*, 1943, 18, 129-132.—Freud's theorizing has provided the basis of modern child psychology because it was soundly grounded in scientific observation rather than in intuitive guess-work. Freud's most important contribution was in his emphasis on the first 5 years of life as the crucial ones in the development of personality. The practical application of the child psychology based on psychoanalysis is made difficult by the fact that the child's personality difficulties are frequently directly traceable to those of the parents. An adequate treatment of a problem child often necessitates treatment of the parent as well.—G. A. Kimble.

3961. Child, Irvin L., Potter, Elmer H., & Levine, Estelle M. (Yale U., New Haven, Conn.) Children's textbooks and personality development; an exploration in the social psychology of education. *Psychol. Monogr.*, 1946, 60, No. 3. Pp. iii + 54.—An analysis of 914 stories, selected from 30 third-grade readers, was made to secure the basic data for this study. The following information was secured for each of the 3409 thema occurring in these stories: (1) type of story (fairy, animal, etc.), (2) type of character (central or anti-social), (3) age, sex, humanity, etc. of character, (4) type of behavior displayed (according to Murray's system of needs), (5) circumstances surrounding the behavior, and (6) consequences of the behavior. The authors conclude: "The observations that have been reviewed on the treatment of various categories of behavior in children's readers can leave no doubt that this treatment is such as to encourage the development of certain motives and to discourage others." Effort or work as a way of reaching goals is repeatedly rewarded, and special emphasis is placed on the acquisition of skills. Girls and women are depicted as sociable, kind, and timid, but inactive, unambitious, and uncreative. The authors conclude that a major defect of these stories is their unrealistic optimism—there are very few cases of failure. 37-items bibliography.—G. G. Thompson.

3962. Das Gupta, J. C. A psychological study of a two-year old. *Indian J. Psychol.*, 1945, 20, 77-85.—A record of the psychological development of a small boy is reported. Protocols were kept from the age of 6 months to the age of 2 years and 9 months. The discussion is psychoanalytically oriented and emphasizes the jealousy the boy felt toward his older brother.—G. A. Kimble.

3963. Fuller, Elizabeth Mechem. How do the children feel about it? *Childh. Educ.*, 1946, 23, 124-132.—The author reports her findings about children's feelings in a study which was made as part of the University of Michigan growth studies. The chronological age range for the 65 children who took part was from 7 years and 4 months to 12 years and 5 months and the mental age range from 7 years

and 6 months to 17 years and 6 months. "Attention was directed toward the child's feeling state, happiness, or general *affectivity* rather than toward specific feelings which are attached to some object or idea." These feeling states were investigated by means of 2 personal interviews with each child about a year apart. The results reveal the negative relationship between affectivity scores and problem tendency scores based on the Haggerty-Olson Wickman Behavior Rating Schedules. "Another interesting suggestion resulted from repeating the affectivity interview series with the same children the following school year. Whereas a child's affectivity level could not be predicted accurately from other measures, (such as growth rate, intelligence, introversion-extroversion and academic achievement) once one affectivity score was obtained it was possible to predict what direction this affectivity was taking by examining these same other measures."—(Courtesy *Child Develpm. Abstr.*)

3964. Guha, Uma. (*Calcutta U., India.*) The concepts of God and the ghost in children. *Indian J. Psychol.*, 1943, 18, 133-137.—Indian children were interviewed in an attempt to discover the psychological basis of their belief in a God and in ghosts. Five different religions were represented in the 365 subjects with Hindu predominating. When the responses of the children were analyzed, it was found that the concept of ghosts was based entirely on fear and hostility. With regard to the concept of God, however, the whole picture was one of pleasant associations and goodness, of power but not of evil.—G. A. Kimble.

3965. Hilgard, Ernest R. Aspirations after learning. *Childh. Educ.*, 1946, 23, 115-118.—The author discusses the goals which children set for themselves and the effect of success and failure upon the goals and upon the child's performance in attaining them. —(Courtesy *Child Develpm. Abstr.*)

3966. Levine, Edna Simon. (*Lexington School, New York.*) Psychological sidelights. *Volta Rev.*, 1947, 49, 123-124; 154-156; 175-176; 200; 219; 246; 248.—Written for the parents of deaf children to help give them insight into, understanding, and acceptance of the problems confronting them. Questions common to most parents are stated and answered. Terms such as residual hearing, heard and felt sounds, deaf and hard of hearing child and deafness and mental ability are defined and discussed. Also the caution against cure treatments and non-medical imposters is stressed. Parents are advised to prepare themselves in understanding principles of child behavior and child psychology and insight into the needs of deaf children. The author includes in her article the names of some of the agencies where one can get helpful reading material.—G. I. Corona.

3967. Lippitt, Rosemary. Psychodrama in the home. *Societry*, 1947, 1, 148-167.—The role-playing stage can become a useful part of family life. A report is made of the use of psychodrama in a family. Sections deal with such topics as overcom-

ing a fear, overcoming emotional blocking, improving social behavior techniques, accepting physical abnormalities in other children, helping the child handle daily frustrations, and bettering sibling relationships.—R. B. Ammons.

3968. Mukerjee, M. J. (*Inspector of Schools, Bareilly, India.*) Indian adolescence; a study of the problems of adolescence in India. Lucknow, India: Teachers' Co-operative Education Journals, 1945. Pp. 156. Rs. 3.—"The book is designed to help parents, teachers, and all social workers who have to deal with youths during this period." The text presents general points of view on adolescence and education without bibliography or direct citation of research. The chief purpose is to present to an Indian audience "in as simple a manner as possible the changes that take place, physically, mentally, morally and sexually during the period of adolescence."—L. J. Stone.

3969. Opper, J. E. (14320 Kinman Road, Cleveland 20, O.) Child psychology at the dental chair. *Oral Hyg.*, 1947, 37, 818-821; 837.—There are dentists who refuse children's practice because of the difficulty in handling the youngsters as well as because children's practice is less remunerative owing to waste of time required by children. The types of children who present the dentist with most difficulty are the poorly disciplined, the stubborn, the temperamental, the frightened. Suggestions are given for dealing with each of these types. The author is of the belief that a better comprehension of child psychology and kindness, patience and a firm conviction that dentistry renders a real health service which starts with the young child can make of children's practice an easy matter.—F. C. Sumner.

3970. Read, Katherine H. A human relationships laboratory. *J. Home Econ.*, 1946, 38, 634-636.—Questionnaires were sent to colleges, mostly land grant institutions, to obtain information as to their practices in using the nursery school as a "human relationships laboratory" for college students. Replies were received from 31 institutions. Wide variations were found in fees, services to parents, size of groups and of staff, and length of daily sessions. Little information was obtained regarding operating costs, but there did not appear to be a relation between fees paid and services rendered to parents. Marked differences were also reported as to number of students who use the nursery school each year and amount of time each one spends in observation and/or participation. The author presents nursery school experience as a method of helping students learn about children and their families.—(Courtesy *Child Develpm. Abstr.*)

3971. Roberts, Katherine E. Behavior as an index of children's needs. *Childh. Educ.*, 1946, 23, 62-66.—The author discusses the relationship between satisfaction and behavior, pointing out that "the primary concern of teachers and parents should be to understand and satisfy these needs in the life of the child." She also discusses factors productive of adjustment and causes of maladjustment and

shows how the personnel of the Rochester Child Health Project, Rochester, Minn., is attempting to help parents understand their children.—(Courtesy *Child Develpm. Abstr.*)

## MATURITY AND OLD AGE

3972. Fischer, A. L. *Charakteristika der seelischen Gesundheit im Alter.* (Characteristics of mental health in old age.) *Gesundh. u. Wohlf.*, 1945, 25, 197-204.—In old age it is a matter of a healthy mind in a not so healthy body. One important sign of a healthy mind in old age is a future-consciousness characterized by expectation, desire, hope, and a prospective, rather than retrospective, orientation. An optimistic rather than pessimistic or sceptical outlook is also an index. The reflective individual is better off in old age than the practical; the dreamer better off than the doer. Change as opposed to stereotypy and habit-rigidity is likewise an important factor in preserving one's mental freshness in senescence. We still know very little concerning the specific aging of individual temperaments and types. Here lies for the gerontologist, whether physician or psychologist, a wide and fruitful field of study.—*F. C. Sumner.*

3973. Gallinek, Alfred. (*Coll. Physicians and Surgeons, New York.*) *Electric convulsive therapy in geriatrics.* *N. Y. St. J. Med.*, 1947, 47, 1233-1241.—The employment of electric convulsive therapy in senile patients is advised for manic-depressive episodes, simple or agitated depressions, neurotic depressions and mixed paranoid depressive states, notwithstanding the presence of the usual physiological changes, accompanying old age. The therapist should, however, evaluate the risks of the treatment on one hand and the risk of continuation of the psychosis on the other. The author doubts that complete, or more or less complete, recovery can be expected, therefore treatment should be stopped as soon as temporary recovery has been achieved.—*F. C. Sumner.*

[See also abstracts 3828, 3845, 3907, 4014.]

BEHAVIOR DEVIATIONS  
(incl. Abnormal Psychology)

3974. Karpman, Benjamin. (*St. Elizabeth's Hosp., Washington, D. C.*) *The evolution of a psychiatrist.* *Quart. Rev. Psychiat. Neurol.*, 1946, 1, 411-421.—The author recapitulates his professional growth and his mode of thinking about mental disorders, whereby he has come to understand the importance of conflict and tension. Their role in various personality types is illustrated by brief case histories.—*C. E. Henry.*

3975. Meyer-Holzapfel, Monika. *Störungen des psychischen Gleichgewichts bei Tieren.* (Disturbances of the psychic equilibrium in animals.) *Schweiz. Z. Psychol. Anwend.*, 1947, 6, 22-40.—Abnormal behavior in animals may be caused by an unusual auditory sensitivity, but more frequently

it is the result of frustrated innate drives or of a conflict between drives. Abnormal behavior occurs in every sphere of animal life: activity in the home territory, pursuit of prey, escape from an enemy, and reproduction. It is especially frequent where social factors are present. Of its many forms the stereotyped movements are especially important. Although it easily disappears when the cause is found and removed, it may also become permanent through strong emotions or simply through habituation. 25 references.—*K. F. Muensinger.*

3976. [New York Academy of Medicine]. *Medical addenda: related essays in medicine and the changing order.* New York: Commonwealth Fund, 1947. Pp. xviii + 156. \$1.75.—This collection of 6 essays, prepared under the auspices of the Committee on Medicine and the Changing Order of the New York Academy of Medicine, includes three, on psychosomatic medicine (3993), psychiatric social work (4002), and rehabilitation and convalescence (4025), of significance to psychologists. These have been abstracted in this issue as indicated.—*C. M. Louttit.*

3977. Nicole, J. Ernest. *Psychopathology; a survey of modern approaches.* (4th ed.) Baltimore: Williams & Wilkins, 1946. Pp. vii + 268. \$4.75.—As the author indicates, relatively few additions have been made since the preceding edition (see 18: 1101). The bibliography has been brought up to date. Chapters dealing with the contributions made by such historical figures in psychopathology as Morton Prince, Freud, Adler, Jung, Rivers, and Watson are included. In addition there are contributions in the more specialized areas such as those made by Berman in the endocrinological approach and Kretschmer in constitutional typology.—*M. A. Seidenfeld.*

3978. Sutermeister, Hans M. *Zur Geschichte des Psychogeniebegriffs.* (On the history of the psychogenic concept.) *Gesundh. u. Wohlf.*, 1945, 25, 377-410.—An exposition of the Bing-Kretschmer "disinhibition or reflex theory" of neuroses and certain psychoses is preceded by a history of the transformations which the psychogenic concept has undergone from Hippocrates and Plato who attributed the shifting symptoms of hysteria to peregrinations of the ungratified womb about the body. This historical sketch traces the changing etiological conceptions of the functional mental illnesses. The Bing-Kretschmer theory, couched in a neurological and reflexological language, attempts to explain psychogenic mental illnesses in terms of oppositions between cerebral cortex and diencephalon and between parasympathetic and sympathetic nervous systems.—*F. C. Sumner.*

3979. Wolbarst, A. L. (667 Madison Ave., New York.) *The gynecic factor in the causation of male impotence.* *N. Y. St. J. Med.*, 1947, 47, 1252-1255.—A source of inhibitory influences upon male potency—one too frequently overlooked—is in psychic and physical changes in the wife with age. Changes in the physical appearance of the wife have

been found responsible for the impotence of the husband in 49 cases reported.—*F. C. Sumner.*

## CLINICAL NEUROLOGY

**3980. Denny-Brown, D., & Munro, Donald.** Post-traumatic syndrome. (Progress report, nos. 1-13, 1942-1944; Publ. Bd. No. M 40945.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 20. \$1.00, microfilm; \$2.00, photostat.—430 cases of head injury admitted to Boston City Hospital were submitted to neurological, psychiatric, psychometric, and electroencephalographic studies and were followed from time of admission. Besides various special studies on the cerebrospinal fluid and cranial nerve palsies, intelligence tests, and electroencephalography on the whole groups of patients, a special statistical analysis on patients between the ages of 15 and 55, with exclusion of chronic alcoholics and vagrants, was made in relation to disability and symptomatology. The findings are reported in these progress reports.—(Courtesy *Bibl. scient. industr. Rep.*, U. S. Dep. Commerce).

**3981. Henry, C. E.** Referral complaints and electroencephalographic classification of 1000 cases seen at a Naval Training Station. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 237-244.—Patients referred for EEG with clinical record of head injury, fainting, or convulsive episodes accounted for 75% of the abnormal records. The EEG is not a diagnostic panacea but the experience reported appears to justify its use in the diagnostic armamentarium of military medicine.—*C. M. Louitt.*

## PSYCHOSES

**3982. Ballard, Leila.** (*The Menninger Foundation, Topeka, Kans.*) Nursing care of the schizophrenic. *Trained Nurse*, 1947, 118, 257-259.—In the care of the schizophrenic the nurse-patient relationship is of extreme importance. The nurse is the central figure in the patient's environment. It is her responsibility to create for the patient an atmosphere of security and protection, adjusting the environment to the patient's individual requirements, and meeting sympathetically his instinctual needs for security, love, and acceptance. The nurse must maintain, however, an objective, non-emotional attitude.—*F. C. Sumner.*

**3983. Marland, Albert E.** Criteria for hospitalization in the depressions. *Quart. Rev. Psychiat. Neurol.*, 1946, 1, 464-467.—"These in general are the indications for hospitalization: severe depression with retardation; stuporous states; the refusal of food; vegetative disturbances; dehydration or progressive weight loss; suicidal attempts or preoccupation with the idea of suicide; neglect of work; withdrawal from social or family interests; the depression that develops concomitantly with progressive degenerative disease, and the failure of other types of therapy of whatever type. Eventually every case must be considered on its own merits. There is no substitute for careful psychiatric study."—*C. E. Henry.*

## PSYCHONEUROSES

**3984. Bose, G.** The mechanism of defiance. *Indian J. Psychol.*, 1945, 20, 15-30.—The case history of a neurotic is reported in considerable detail to illustrate the clash between the ego and super-ego which the author considers the basic mechanism of defiance.—*G. A. Kimble.*

**3985. Fisher, Charles.** The psychogenesis of fugue states. *Amer. J. Psychother.*, 1947, 1, 211-220.—On the basis of a study of 24 Coast Guard and Merchant Marine patients with fugue, the author differentiates 3 types: (1) fugue with awareness of loss of personal identity; (2) fugue with change in personal identity; and (3) fugue with retrograde amnesia. Many patients give a history of other types of altered states of consciousness. Analysis indicated that "in the fugue the individual is always doing something which is in conflict with his super-ego . . . and the function of the fugue is to permit the carrying out of these acts or fantasies. In the most severe type . . . the subject has to ward off a panic-inspiring impulse—the impulse to murder. . . . The loss of identity may be both a symbolic suicide and a symbolic murder." Fugues where there is awareness of loss of personal identity are improperly classified as hysterical conversion; they represent a more serious disorder, closely allied to psychosis. Discussion.—*E. M. L. Burchard.*

**3986. Gutheil, Emil A.** A rare case of sadomasochism (torture by tickling). *Amer. J. Psychother.*, 1947, 1, 87-92.—This is a case report of a 39-year-old lawyer who has been obsessed since early childhood by sexual ideas connected with the act of tickling. Since the patient was not analyzed, only speculation is possible as to the interplay of sadistic and masochistic elements, homosexual trends, and fetishism in the creation of this unusual paraphilia.—*E. M. L. Burchard.*

**3987. Seliger, Robert V.** Medical-psychological aspects of alcoholism. *J. clin. Psychopath.*, 1947, 8, 577-586.—The medical definition of an alcoholic is one whose drinking definitely interferes with one or more of his important life activities. Alcoholism may be part of any clinical reaction type. Furthermore, not all alcoholics can be helped; nor are all alcoholics hopeless cases. Careful examination needs to precede treatment to decide which group the alcoholic belongs to and what type of treatment offers the best chance at recovery. Individual therapy often uncovers personality disturbances which contribute to or develop the alcoholism. In order for treatment to be successful, the patient must fervently desire help, and full cooperation must be elicited from the family. The author suggests that the whole problem of alcoholism constitutes a problem not only of the individual but of society and that society must assume responsible action in developing curative facilities and preventive educational measures.—*G. A. Muench.*

**3988. Taylor, Charles W.** The management of psychoneurosis. *U. Toronto med. J.*, 1946, 24,

23-28.—The signs are enumerated by which psychoneurosis—the commonest type of illness met in general practice—can be recognized. In addition a list of questions is formulated to be put to patients suspected of suffering from psychoneurosis. Tension symptoms, signs of autonomic disturbance, absence of organic disease, pressures of stressing situations, unhealthy reaction patterns, childhood neurotic traits are evidences which support a positive diagnosis of psychoneurosis. The aim of symptomatic therapy should be removal of excessive stress, elimination of immature and unhealthy personality traits, and substitution of mature and healthy reaction patterns. Symptomatic therapy should always be used in conjunction with causal therapy, which may utilize either the cathartic or the analytic method or, in acute anxiety states, hypnotic or narcotic methods.—F. C. Sumner.

3989. Wilder, Joseph. A semi-obsession à deux. *Amer. J. Psychother.*, 1947, 1, 193-196.—This is a case report of an obsessive visual image which appeared in slightly altered form to a husband and wife. Discovery of the place to which the image referred was followed by its disappearance. It is suggested that the phenomenon resulted from a forceful attempt at partial repression of a painful remembrance. The relevance of such everyday psychopathology to active and brief psychotherapy is discussed.—E. M. L. Burchard.

#### PSYCHOSOMATICS

3990. Biggar, Jean. Psychology and medicine. *Indian J. Psychol.*, 1943, 18, 11-20.—Psychology is defined as "the study or science of how the mind works and of the motives or driving energy which lie behind all our activity whether mental or physical." Properly speaking, psychology is concerned with one aspect of man's biology, and therefore plays an important part in medicine, even when none of the typical psychiatric disorders is present. The chief psychological factor involved in ordinary medicine is anxiety which may complicate the course of development of any somatic disease. Three case histories are presented to illustrate the importance of this psychosomatic relationship. Because of the importance of psychological factors in disease, the author foresees the increased use of psychoanalysis with "normal" patients.—G. A. Kimble.

3991. Glatzel, Hans. Über die Ursachen der Ulkuskrankheit. (On the causes of peptic ulcer.) *Med. Klinik.*, 1947, 42, 9-15.—Two major factors are determinative of peptic and duodenal ulcer: (1) psychophysical constitution (ulcer-personality) and (2) conflict situations. On the physical side of ulcer-personality are seen an instability of the vegetative functions and a leptosome physique while on the psychic side the ulcer-personality exhibits sensitivity, irritability, strong will to work, to creation, and to recognition. The ulcer-personality suffers psychophysically from non-recognition, non-appreciation, threat to security, and freedom at each life phase. According to the author "peptic ulcer is not the re-

sult of an unsolved conflict; it is the psychophysical side of the conflict itself." Therapy found successful by him consists in effecting changes in the life-situation of the patient where possible, or else in bringing the ulcer-disposed person to a reconciliation with what as a goal is within his power and to a renunciation of bitterness and resentment.—F. C. Sumner.

3992. Glatzel, Hans. Ulcuspersönlichkeit und Ulcuserlebnis. (Ulcer-personality and ulcer-experience.) *Klin. Wschr.*, 1947, 24-25, 257-262.—On the basis of an intensive study of the personality and life-history of patients with gastric and duodenal ulcer the author sees in ulcer the bodily expression of an abnormal, i.e., neurotic conflict-release. In other words, gastric ulcer is an abnormal bodily experience-reaction of a specifically fashioned human being in a specifically fashioned conflict-situation. The quest for a satisfactory ulcer-therapy and the quest for the cause of ulcer-increase bears evidence to the effect that gastric ulcer is an abnormal experience-reaction.—F. C. Sumner.

3993. Hamman, Louis. Psychosomatic medicine. In *Medical addenda*, 1947. (see 21: 3976.) Pp. 9-37.—"Psychosomatic medicine is a new term for a very old subject." While its current concepts have grown from the psychiatrist's interest in the relations between emotional and personality disturbance and physical conditions the author points out that its influence is most valuable in general medical practice. "It is the element in practice that focuses attention upon the patient as a person and puts his individual problems and needs above the mere consideration of disease."—C. M. Louttit.

3994. Hutchings, Richard H. Remarks on psychosomatic medicine. *North. N. Y. med. J.*, 1947, 4, 7-9.—Attention is called to the role of anxiety, fear, discouragement or apprehension accompanied by general or localized muscular tensions, insomnia, or anorexia in producing headache, cardiac palpitations, pain in stomach or nausea and aversion to food, disturbance of respiratory function, so called mucous colitis, dysmenorrhea. The purpose and plan of treatment is to encourage patient to abandon his immature pattern of reaction and to take on the qualities of mature adulthood.—F. C. Sumner.

3995. Werner, August A. (St. Louis U., Sch. Med., St. Louis, Mo.) Syndrome characteristics for menopause, ovarian hypofunction and castration in the human female. *J. Mo. med. Ass.*, 1946, 43, 311-315.—A clinical study is reported of 197 women with ovarian hypofunction, of whom 53 were castrates, 96 were women in menopause and 48 were women having involutional melancholia. Physical signs, and a variety of subjective symptoms were found common to all three groups of women. The author concludes that both objective and subjective symptoms are initiated by the ovarian hypofunction.—F. C. Sumner.

3996. Young, Richard H. Psychiatric aspects of pain in the neck. *Neb. St. med. J.*, 1947, 32, 107-108.—While a pain in the neck is actually from muscle

tension, the latter originates from emotional tension and can be relieved adequately only by relief of the personality disturbance. Pain in the neck is to be understood as a useful conversion phenomenon or focus of excuse. A case is given in which pain in the neck developed in a man who was continually unsuccessful in his competitive rivalry with his older brother.—*F. C. Sumner.*

## SPEECH DISORDERS

3997. Abney, Louise. *Prevalent faults in speech.* *Instructor*, 1946, 55, 22-23.—This article is an aid to the regular classroom teacher who has neither had special training in speech correction nor the benefit of a regular speech teacher in the school. The suggestions offered are very simple and could assist her in diagnosing and correcting prevalent faults in classroom speech. Baby talk, lisping, omissions, and sound substitutions are discussed. Lists of troublesome sounds and words are given with techniques in the form of games which can be used as remedial measures.—(Courtesy of *J. Speech Disorders*).

3998. Arnold, Gottfried. *Über Physiologie, Pathologie und Therapie der Stimme und Sprache.* (On the physiology, pathology and therapy of voice and speech.) *Wien. med. Wschr.*, 1946, 96, 137-142.—A brief expository review of speech disturbances, physiogenic, and psychogenic.—*F. C. Sumner.*

3999. Arthur, Julietta K. *Help for stutterers.* *Parents' Mag.*, 1946, 21, 44.—Advice and aids are given to parents in the psychological and educational training of the child at home. The author stresses the 10 commandments for parents as drawn up by the National Hospital for Speech Disorders and presents numerous helpful devices in parent-child therapy for the stutterer. She also explains how a speech defect can be recognized and labeled by a parent.—(Courtesy of *J. Speech Disorders*).

4000. Eisenson, Jon. *Psychological evaluation of aphasic patients.* In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 227-230.—The author briefly comments on the work with aphasics at Halloran General Hospital. His experience suggests a lack of reliable correlation between type of language dysfunction and site of brain injury, the lack of capacity to abstract is not general, aphasia appears to follow injury of patients with pre-morbid average or higher intelligence, and pre-morbid personality factors are highly significant.—*C. M. Loultit.*

4001. Ram, Pars. *Some problems in the treatment of stammering.* *Indian J. Psychol.*, 1945, 20, 91-92.—The author distinguishes three types of intellect: the repetitive type, the intuitive type, and the creative type. Stutterers are predominantly of the repetitive type. Treatment of such people involves teaching them to relax before attempting to speak and giving speech exercises.—*G. A. Kimble.*

## THERAPY AND REHABILITATION

4002. Arrington, Winifred W. *Psychiatric social work.* In *Medical addenda*, 1947. (see 21: 3976.)

Pp. 82-102.—The history of psychiatric social work is traced from its beginnings with the "after-care agent" of a few mental hospitals during the early 20th century to the present day profession, working in close collaboration with the psychiatrist, and bringing a psychiatric orientation to a variety of social work agencies.—*C. M. Loultit.*

4003. Church, Aloysius S., & Gooden, Genevieve. (*St. Joseph's Retreat, Dearborn, Mich.*) *Occupational therapy in psychiatric treatment.* *Occup. Ther.*, 1947, 26, 79-84.—A method of organizing occupational therapy treatment for the specific psychiatric disorders is suggested, and is illustrated by application to schizophrenic disorders.—*G. S. Speer.*

4004. Cooper, Melbourne J. (*Nix Professional Building, San Antonio 5, Tex.*) *The management of emotional disorders in adults.* *Tex. St. J. Med.*, 1947, 43, 60-64.—The author sets forth the main steps in his successful management of emotional disorders in the normal adult as follows: (1) reduction of the immediate tension by a reassuring manner and by a logical approach to the patient's problems, with rest and chemical sedation, if necessary; (2) identification of the conflict situation or frustrating circumstances; (3) desensitization of patient by ventilation and by gradual mental catharsis with spontaneous improvement of the insight and tolerance of the patient for his own hostilities; (4) redirection of the drives and their attached energy into comparatively useful channels and into non-neurotic reaction patterns, after patient has developed better insight; and (5) resynthesis of patient's practical ways of overcoming his frustrations and discharging his emotional tensions in the future. Capital importance is attached to the gradual desensitization of the patient and to simultaneous ventilation and catharsis by having the patient keep a daily diary which affords a valuable tool for speeding up ventilation of repressed conflict, for ventilation of his most hostile attitudes and reactions without increasing a sense of guilt, and for improving insight rapidly.—*F. C. Sumner.*

4005. Esquirol, Jean-Étienne-Dominique. *Mental maladies.* *Occup. Ther.*, 1947, 26, 181-183.—This is one of the series of the reprint classics in occupational therapy. First published in 1838, the paper appraises the value of music and other forms of occupational therapy in the treatment of the mentally ill.—*G. S. Speer.*

4006. Fantel, Ernest. *Repetition and psychodrama.* *Societry*, 1947, 1, 236-238.—Using psychodrama, it is possible to recreate a traumatic situation. Ordinarily this situation has been experienced repeatedly, as in combat. Repetition of the situation psychodramatically gives an opportunity for the patient to relive the situation, understand his feelings, see the situation objectively, and finally to practice more adequate reactions.—*R. B. Ammons.*

4007. Federn, Paul. *Principles of psychotherapy in latent schizophrenia.* *Amer. J. Psychother.*, 1947, 1, 129-144.—Latent schizophrenia should be carefully differentiated from early schizophrenia, since

each condition requires a different therapeutic approach. Although neurosis often appears in the latent schizophrenic, no attempt should be made to cure it; standard psychoanalysis should not be used; and it must be anticipated that treatment will last indefinitely. The therapist must give mental hygiene guidance to the entire family if he is to obtain optimum results with the patient. The basic aim of therapy is the re-repression of instinctual material which has erupted into the ego as a result of weakening or loss of ego boundary cathexes. The patient is assisted in establishing a positive object libido transference and in identifying with a helping personality. Direct and deliberate advice and aid in sparing, preserving, regulating, and exercising the mental powers (especially the sexual) must be given to the latent schizophrenic. Early recognition of the beginning of the psychotic phase is essential for best treatment results. 25 references.—E. M. L. Burchard.

4008. Herriott, Frances. (*St. Elizabeth's Hosp., Washington, D. C.*) *Psychodrama*. *Quart. Rev. Psychiat. Neurol.*, 1946, 1, 458-462.—Examples of the art and music activities of the St. Elizabeth's Hospital theater and the technique of psychodrama are discussed. Patients may play the role of the questioner or the self, thus giving them helpful practice in facing and handling employment and other situations that are likely to arise at a later date. Brief scenes are summarized.—C. E. Henry.

4009. Karpman, Benjamin. (*St. Elizabeth's Hosp., Washington, D. C.*) *Incidental comments on psychotherapy*. *Quart. Rev. Psychiat. Neurol.*, 1946, 1, 430-432.—The general practitioners (non-specialists) in psychotherapy are strongly criticized for their avoidance of deep psychotherapy. They are quick to seize upon new drugs and machines. Thus insulin, metrazol and electroshock therapy have often been used with patients who were free of depression, and therefore may not have been expected to benefit thereby.—C. E. Henry.

4010. Katzenelbogen, Solomon. (*St. Elizabeth's Hosp., Washington, D. C.*) *Psychobiological therapy*. *Quart. Rev. Psychiat. Neurol.*, 1946, 1, 432-438.—Adolph Meyer's comment that "psychobiology studies not only the person as a whole, as a unit, but also the whole of man" is accepted and discussed. Psychobiology uses both non-specific and specific psychotherapy. The spontaneous and elicited statements of the patient are the primary data and the source of future therapy.—C. E. Henry.

4011. Kelleher, Helen M., & Wessel, Rosa. *The record of Mrs. Pauline Beckman's year of probation*. In *Wessel, R., A case work approach to sex delinquents*, 1947. (see 21: 4030.) Pp. 80-131.—The author's purpose in presenting a record was to illustrate in its significant detail a complete process of a year of probation in which the client had been active with the agency. A comment by Rosa Wessel on the case is appended.—R. D. Weitz.

4012. Kelleher, Helen M. *The referral of Mrs. Dryden from rapid treatment center to protective*

service. In *Wessel, R., A case work approach to sex delinquents*, 1947. (see 21: 4030.) Pp. 74-79.—The beginning of a voluntary case is presented and shows the start of the process of a period of protective service case work.—R. D. Weitz.

4013. Kline, Nathan S. (*Vet. Admin. Hosp., Lyons, N. J.*) *Volunteer workers*. *Occup. Ther.*, 1947, 26, 153-166.—Volunteer workers can be of great value in a mental hospital, but for the protection of the hospital and the worker they must be carefully screened. The techniques used in screening and in indoctrination are described in detail, including a questionnaire on attitudes and information relating to mental patients.—G. S. Speer.

4014. König, Karl. *Work among problem children*. *Brit. homoeop. J.*, 1947, 37, 12-25.—The author describes his 18 years of work in northern Scotland among problem children, varying in age from babyhood to 24 years. The author is associated with the Camphill Rudolf Steiner Schools which have, as their aim, "curative education." Personality and individuality are developed through a coordination of educational, psychological, and medical treatment. Each child is viewed as a unique individual. The educational work starts with a development of self-confidence and stresses throughout artistic expression. Cases are presented to illustrate the coordination of educational, psychological, and medical treatment.—F. C. Sumner.

4015. Kroll, Stanley. *Concealment of facts in psychoanalysis*. *Amer. J. Psychother.*, 1947, 1, 145-154.—Four cases are cited in which patients undergoing analysis consciously concealed or falsified facts, despite their knowledge that this would jeopardize the success of the treatment. This resistance often represents the patient's desire to preserve an immaculate picture of his ego, which illusion is more precious to him than recovery from his symptoms. Occurrence of this type of resistance to getting well presents to the analyst a task essentially different from that of any other type of physician.—E. M. L. Burchard.

4016. Meiers, J. I. *Three "word histories" important in psychodrama; persona-rôle-spontaneity*. *Sociometry*, 1947, 1, 239-242.—The "histories" of three words are traced: "persona," "role," and "spontaneity."—R. B. Ammons.

4017. Morgenthaler, W. *Über halbambulante Psychotherapie*. (Semi-ambulant psychotherapy.) *Schweiz. Z. Psychol. Anwend.*, 1947, 6, 41-54.—By semi-ambulant psychotherapy is meant a certain kind of collaboration between the freely practising psychotherapist and the clinical psychiatrist. When psychotherapy alone is not effective certain cases, mostly neuroses with a schizoid basis, are sent to the clinic for electro-shock treatment. When no indications of complications are present the patient may be discharged the same evening and psychotherapy is continued until the next shock treatment in about a week, and so on. One case is described in detail with excerpts from the Rorschach records.—K. F. Muensinger.

**4018. Moss, Rose A.** A valid focus for case work service in a rapid treatment center. In *Wessel, R., A case work approach to sex delinquents*, 1947. (see 21: 4030.) Pp. 35-73.—Need for the development of a brief case work service arose out of the establishment of rapid treatment centers for the cure and control of venereal diseases throughout the country. Based on the conviction that the social diseases are a product of unstable social relations and of promiscuous and delinquent behavior, the case work service has been focused on behavior, and directed toward the patient's different and more constructive use of herself after cure. Three cases are presented to illustrate the achievement attained during 2 interviews.—*R. D. Weitz*.

**4019. Panken, Jacob.** (*The Children's Court, New York.*) Psychotherapeutic value of books in the treatment and prevention of juvenile delinquency. *Amer. J. Psychother.*, 1947, 1, 71-86.—Bibliotherapy has proved to be a useful means of treating many juvenile delinquents for whom psychotherapy was unavailable. Careful prescription of books according to an individually conceived psychological plan has achieved desirable results through stimulating healthy identifications, altering anti-social attitudes, and ameliorating the effects of noxious environments. To check upon the success of this therapy as well as to provide motivation, the children were encouraged to send to the judge a review of each book they had read. Personal letters were then written to the children commenting upon their reviews. Several reviews and answering letters are quoted.—*E. M. L. Burchard*.

**4020. Pinel, Phillip.** Medical philosophical treatise on mental alienation. *Occup. Ther.*, 1947, 26, 63-68.—This is the second in the reprint series of classics in occupational therapy. First published in 1801, this paper presents the philosophical and practical arguments for the use of occupational therapy in the care and treatment of the mentally ill.—*G. S. Speer*.

**4021. Rappaport, Mazie F.** The possibility of help for the prostitute through functional case work in an authoritative setting. In *Wessel, R., A case work approach to sex delinquents*, 1947. (see 21: 4030.) Pp. 9-34.—The Protective Service of the Baltimore Department of Public Welfare established a comparatively new case work service for promiscuous girls and prostitutes. It was set up to help those who want to change their way of living. Throughout the service more and more responsibility for her behavior is placed upon the client.—*R. D. Weitz*.

**4022. Render, Helena Willis** (*Iowa State Psychopathic Hosp., Iowa City.*) Nurse-patient relationships in psychiatry. New York: McGraw-Hill, 1947. Pp. ix + 346. \$3.00.—The basic approach in this textbook on psychiatric nursing is that nursing care can constitute an important therapeutic situation for the patient. Emphasis is accordingly placed on the importance of the nurse's attitude and behavior toward the patient rather than on nursing techniques

as such. Chapters on the general care of the psychotic patient as well as on the treatment of specific behavior symptoms, such as aggressiveness, refusal of food and sleep disturbances, stress concrete ways in which the nurse can build up feelings of security and self-respect in the patient. A special chapter is devoted to art, literature, and music as therapeutic aids for the patient and as a means of adding to the nurse's understanding of personality development. The appendix includes a comprehensive list of visual aids for use in the teaching of courses in abnormal psychology and psychiatry.—*E. Raskin*.

**4023. Rodgers, Terry C.** Hypnotherapy in character neuroses. *J. clin. Psychopath.*, 1947, 8, 519-524.—Emotional deprivation in infancy may result in predominantly passive or predominately aggressive behavior. The impulsively aggressive individuals characteristically get into difficulty; but the thoroughly passive individuals frequently escape identification and, as a consequence, escape treatment. In a group of such passive individuals, the author found that they suffer from affect hunger, and an accepting attitude on the part of the therapist is absolutely necessary. Insight is not the primary consideration in treatment, but support, understanding, and respect are the key to successful therapy in these cases. A case is presented which illustrates hypnotherapy and deals with such passive individuals by using a short, active, educative, personality integrating approach. A theory as to the dynamics underlying the apparent efficaciousness of hypnotherapy is offered.—*G. A. Muench*.

**4024. Rush, Benjamin.** Medical inquiries and observation upon the diseases of the mind. *Occup. Ther.*, 1947, 26, 177-180.—This is another in the series of reprint classics in occupational therapy, and is taken from the first book written in the United States on the subject of mental diseases, published in 1812. This selection is concerned with the remedies for hypochondriasis, and demonstrates the relationship between mood and enjoyment.—*G. S. Speer*.

**4025. Rusk, Howard A.** (*New York U., Coll. Med.*) Rehabilitation and convalescence, the third phase of medical care. In *Medical addenda*, 1947. (see 21: 3976.) Pp. 103-126.—Rehabilitation during convalescence, and of the permanently disabled, is an important aspect of total management of the patient. Such rehabilitation involves recreation, occupational therapy, vocational and psychological guidance, and occupational placement. Investigations on the results of various rehabilitation programs are reviewed. 35 references.—*C. M. Louitt*.

**4026. Schmideberg, Melitta.** The treatment of psychopaths and borderline patients. *Amer. J. Psychother.*, 1947, 1, 45-70.—The author describes her method of treating psychopaths and borderline schizophrenics. Radical modification of classical psychoanalysis is required because such patients neither can be treated by classical analysis nor can be cured by anything short of analysis. These patients are difficult because they accept treatment

reluctantly, are irregular in keeping appointments, do not associate freely, and do not readily establish emotional contact. It is therefore necessary that the analyst be extremely flexible and elastic about all aspects of the treatment situation. This flexibility requires—among many other deviations from usual analytic procedure—activity, exhortation, and even intervention by the therapist; spontaneity and naturalness; carefully timed interpretations; and tolerance of an irregular time schedule. Discussion.—*E. M. L. Burchard.*

4027. Stransky, Erwin. (*U. Vienna, Austria.*) Autorität und Subordination in der Psychotherapie der verschiedenen Lebensphasen. (Authority and subordination in the psychotherapy of the various phases of life.) *Wien. klin. Wschr.*, 1946, 58, 39-41.—The nature of *rapport* between client and psychotherapist is a subordination-authority-relation. Without the presence of this relation psychic treatment is impossible. The optimal S-A-R is a reversible relation. It is entered upon spontaneously. With different life-stages the ascendent and submissive roles change hands. Children spontaneously give ascendancy to adults; adolescents, although somewhat critically, give ascendancy to adults of a kind. Women becomes spontaneously submissive to men. At the climacteric women subordinate themselves to young men. While medical men usually enjoy prestige, i.e. ascendancy, but particularly so from the suffering, greater success in psychotherapeutic work comes about in the case where the client and the psychotherapist have just the right S-A-R.—*F. C. Sumner.*

4028. Van Wagenen, William P. (*U. Rochester, Rochester, N. Y.*) Observations on changes in states of mental depression and tension following surgical section of certain frontal lobe pathways. *Surgery*, 1946, 20, 656-662.—Prefrontal lobotomy is found sufficient to secure relief from states of mental depression and tension. Division of white association fibers in the corpus callosum *per se* is not followed by change in states of mental depression or tensions. Cases are presented on which the observations were made.—*F. C. Sumner.*

4029. Watkins, John G. (*Welch Convalescent Hosp., Pullman, Wash.*) The hypnoanalytic treatment of a case of impotence. *J. clin. Psychopath.*, 1947, 8, 453-480.—A case of impotence is analyzed to illustrate the objective of hypnotherapy as an aid toward resolving neurotic structures through insight rather than the suppression of symptoms by direct suggestion. The symptoms did not respond to direct post-hypnotic suggestion until a certain degree of insight was achieved by the patient. Furthermore, intellectual understanding of underlying dynamics did not solve the problem until deeper reorganization and integration occurred on an emotional plane. Part of the therapy was conducted individually and part was conducted in a group therapy session. 10 months after therapy, the patient was still a happy and well adjusted person in his sexual life and in his job. In applying the

treatment method to other situations, the author cautions against using the method to completely "analyze" the personality and that it may have serious consequences in patients with less ego-stability due to the directness of treatment technique.—*G. A. Muensch.*

4030. Wessel, Rosa [Ed.] *A case work approach to sex delinquents*. Philadelphia: Pennsylvania School of Social Work, 1947. Pp. 132. \$1.50.—Treatment of sex delinquents through social case work procedures are discussed by Rappaport (4021), Moss (4018), Kelleher (4012), and Kelleher & Wessel (4011), each of which is abstracted in this issue.—*R. D. Weitz.*

4031. Will, Otto Allen, Jr. Remarks on current problems of psychiatric therapy. *Quart. Rev. Psychiat. Neurol.*, 1946, 1, 438-449.—This is a critical discussion of some of many problems besetting the field of psychiatry. Despite an urgent need for new and more adequate therapeutic techniques, psychiatrists have been prone to adopt and cling to (often outworn) procedures. Uncritical psychoanalysts have failed to meet the needs for widely applicable and preferably brief psychotherapies. There is a very great discrepancy between the ideals of therapy (achieved in only a few institutions) and the general level of its application. Psychiatric wards in general hospitals would be mutually beneficial to all concerned. Psychosomatic medicine represents the current trend of psychiatry to participate more closely in general medicine. There is a dual need for more critical research and more widely diffused lay and professional education. The not inconsiderable qualifications of a good psychiatrist are summarized.—*C. E. Henry.*

4032. Wolff, Harold. Hypnosis its use and abuse. *Sci. ill.*, 1946, 1, No. 6, 66-68.—Hypnosis until recently associated by the medical world with pseudo-scientific charlatanism and theatrical hocus-pocus is today being used increasingly by physicians to get at and to remove the deeply rooted emotional causes of physical and mental ills.—*F. C. Sumner.*

#### CLINICAL PSYCHOLOGY

4033. Babcock, Charlotte G. Psychologically significant factors in the nutrition interview. *J. Amer. diet. Ass.*, 1947, 23, 8-12.—The dietician makes many types of nutrition interviews, both with patients and staff members. The interview may be markedly successful or dismally unsuccessful, depending upon the attention which is given to the psychological factors involved.—(Courtesy *Child Develpm. Abstr.*)

4034. Cofer, C. N. An analysis of the concept of "clinical intuition." In Kelly, G. A., *New methods in applied psychology* (see 21: 4140), 1947. Pp. 219-227.—The usual experience of clinical psychologists appears to indicate that clinical judgments are made on factors beyond those supposedly involved in, e.g., the testing situation. The author, largely through analysis of his own working methods, has isolated approximately 25 specific features of test

performance, other than score, and of patients' general behavior which appear to be important in his "clinical intuition." Of these 6 are especially discussed: manner of verbal expression, quality of reasoning, flexibility of method, special aids to performance, manipulation of material, and certain specific responses. The author suggests that there is need for research on the factors involved in "clinical intuition."—C. M. Louttit.

4035. Holzberg, J. D. Clinical techniques in an Army neuropsychiatric hospital. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 211-219.—The author describes the duties of the clinical psychologist in Mason General Hospital. These duties include clinical psychometrics, educational and vocational guidance, patient opinion surveys, conducting classes for medical officers and nurses, development of group therapy programs, and research. The author comments from his experience on the training needs in clinical psychology.—C. M. Louttit.

4036. Hunt, H. F., & Goldman, N. Case history items as detectors of potential naval delinquents. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 66-71.—A scale based on 17 case history items which occurred with significantly different frequency among naval offenders than among non-offenders was developed. Attempts to increase the value of the scale by weighting the items were unsuccessful. The original scale is suggested as of value, when clinically used, as a device for screening potential delinquents.—C. M. Louttit.

4037. Hunt, W. A. Postwar clinical psychology in the Navy. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 262-264.—Brief comments on the future of the use of the clinical psychologist in the navy.—C. M. Louttit.

4038. Moynihan, James F. (*Boston Coll., Boston, Mass.*) Student counseling in Catholic education. *J. higher Educ.*, 1947, 18, 254-258.—Organized guidance may enjoy a development in the postwar educational situation similar to the growth of the testing movement after the first world war. The dynamics of the whole individual cannot be considered without taking into account the student's philosophical and religious outlook on life. This is in accord with Catholic educational theory and practice. Group counseling in religious matters is provided in religious instruction given in classes; individual counseling is provided by all members of the faculty who are priests, whether in their capacity as counselors, confessors, or teachers. Religious guidance can be most effective in individual counseling on personal problems. This is understood by Catholic counselors through a tradition that antedates both formal psychiatry and mental hygiene. The personal problems treated in the confessional and in the psychiatric interview may be similar. However, the therapeutic value of the former is not derived from mere emotional unburdening or clarifi-

cation of feelings, but rather from awareness that conscious guilt has been forgiven.—M. Murphy.

4039. Owens, W. A., & Zirkle, G. A. The form of items and the distribution of false positive scores on a neurotic inventory. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 190-194.—A personality questionnaire, called the Experience Comparison Index, with 30 items requiring a "yes-no" response was found to give too high a proportion of false positive responses when given to Naval personnel returning from sea duty. The questions were changed to paired statements. This new Personal Check List showed a significant decrease in false positive responses. Because the practical demands of the situation in which the work was done did not allow for continued investigation the desirability of research on the influence of item form is suggested.—C. M. Louttit.

4040. Rey, André. Le point de vue psychométrique dans le diagnostic psychologique. (The psychometric point of view in psychological diagnosis.) *Schweiz. Z. Psychol. Anwend.*, 1947, 6, 11-22.—The psychometric point of view is defined and its abuses and relative value are discussed. The clinical use of standardized tests will increase the prognostic value of a psychometric diagnosis. Psychometric methods bring to light not only certain facts, but also their interrelations which are neglected by other methods.—K. F. Muenzinger.

4041. Seidenfeld, Morton A. Postwar clinical psychology in the Army. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 260-262.—Brief comments on the future use of clinical psychologists in the Army.—C. M. Louttit.

4042. Ward, Carlos E. (Vet. Admin., Washington, D. C.) What the Veterans Administration is doing to improve counseling. *Occupations*, 1947, 25, 498-500.—Veterans Administration forms, manuals, and bulletins are described, and procedures for evaluation of counseling are indicated. Group guidance, and counseling of severely disabled and hospitalized patients are briefly described.—G. S. Speer.

4043. Wexler, M., Owens, W. A., & Porter, R. B. Test procedures for the psychiatric screen of naval personnel. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 60-66.—Several approaches to the problem of pre-screening potential psychiatric problem cases were tried by the Bureau of Naval Personnel. A Personal Inventory, with forced-choice responses and a Personal Check List, with paired-choice responses were most used, with the latter being preferred. With various populations these instruments screened upward of 75% of psychiatrically diagnosed cases and included less than 10% of "normal" cases.—C. M. Louttit.

[See also abstracts 3786, 3814, 3830, 3912, 3952, 3966, 3967, 3973, 4072, 4073, 4077, 4078, 4079, 4082, 4085, 4086, 4091, 4118, 4152, 4175, 4176.]

## SOCIAL PSYCHOLOGY

4044. Chance, M. R. A. (*U. Birmingham, England.*) A peculiar form of social behaviour induced in mice by amphetamine. *Behaviour*, 1947, 1, 64-70.—"Large doses of amphetamine (in excess of 10 mg. per Kg.) at temperatures in excess of 60° F. induce a peculiar form of social behavior in a number of mice confined together in sufficient space to allow individual freedom of movement. This behavior is characterized by excessive running and excitability of the mice. This passes through 3 stages and attention is focussed on the second phase when the normal ability of mice to avoid one another while in movement is lost and "defensive encounters" occur between pairs of mice. The behavior of the second phase is interpreted as indicating a loss of cortical integration. The literature bearing on the interpretation of this phenomenon is discussed and it is suggested that amphetamine brings about this loss of cortical integration by an alteration of the physiological relationships between the anterior poles and the rest of the brain."—*L. I. O'Kelly*.

4045. Darley, J. G. War weariness and morale in air groups. In Kelly, G. A., *New methods in applied psychology* (see 21: 4140), 1947. Pp. 129-135.—"Combat fatigue" was a frequently used label for psychological conditions which lowered combat effectiveness in the individual and thus in the squadron. Investigation of combat ineffectiveness by interviews with combat aviators, and by the use of sociometric techniques, suggests that leadership, non-combat duty, and certain administrative factors are of equal or greater importance than combat itself in contributing to "war weariness." Turnover of squadron personnel, represented by an index of 150% or more, was apparently due in large measure to shifts of pilots considered poor and unacceptable by their fellow pilots. The author feels that the significance of this study lies in its contribution to a methodology of investigation of social psychological problems presented in Naval combat units.—*C. M. Louttit*.

4046. Gray, William S. (*U. Chicago, Ill.*) The social effects of reading. *Sch. Rev.*, 1947, 55, 269-277.—The effects of reading on personal development and on social attitudes and behavior are summarized in this survey of experimental studies which are grouped under the following headings: (1) information and beliefs, (2) attitudes and morale, (3) public opinion, (4) voting, and (5) crime and anti-social behavior. Additional reference is made to a group of researches concerning factors which influence reading outcomes, as predispositions of the reader and conditions under which the reading is done.—*R. C. Strassburger*.

4047. Haskell, Edward F. (*Brooklyn Coll., New York.*) A natural classification of societies. *Trans. N. Y. Acad. Sci.*, 1947, 9, 186-196.—Two criteria are noted for an adequate system of natural classification: (a) that the classified property be related to all other properties of the classificand, so that its classification will involve their classification; (b)

that the constructs in terms of which the classification is stated be amenable to mathematical manipulation. Such a property, called "coaction," has been discovered in fish society, characteristic of any situation in which strong individuals increase or decrease a life process in weaker individuals, or vice versa, or both. On this basis a classification system is presented which may be applied to any group of organisms, including man. Like the atomic table, the coaction table is periodic. The possible directions in which the present capitalistic system (predation) may develop are suggested.—*F. W. Finger*.

4048. Mehta, H. P. Psychology of impurity. *Indian J. Psychol.*, 1945, 20, 53-59.—Impurity is used to designate "the state of an object which is qualified by such epithets as unclean, dirty, foul, unchaste, nauseating, etc." Impurity is a concept which pervades many spheres of behavior. Biologically it is related to the causes of infectious diseases. Aesthetically we are repelled by dirty objects. Socially, the term is associated with unacceptable sexual practices. In religion taboos are attached to impure objects.—*G. A. Kimble*.

4049. Richardson, Lewis F. The number of nations on each side of a war. *J. roy. statist. Soc.*, 1946, 109, 130-156.—The bivariate distribution of the number of nations on the two sides of each war (1820-1939) is studied empirically and theoretically. The best fitting function for the frequency of  $r$  nations versus  $s$  nations is  $(rs)^{-2.5}$ . Thirteen theoretical explanations are stated and tested by the data. The conclusions is that the probability of war is based on "a chaos, restricted by geography, and further modified by the infectiousness of fighting."—*F. Gehlmann*.

4050. Sorokin, Pitirim Aleksandrovich. (*Harvard U., Cambridge, Mass.*) Society, culture, and personality: their structure and dynamics. A system of general sociology. New York: Harper, 1947. Pp. xiv + 742. \$5.00.—Great stress is placed upon the reality, independence, and causal efficacy of social phenomena (such as groups and institutions) by means of a doctrine of the "Super-organic Universe." It is impossible to explain individual behavior (personality) by reference to individual developmental factors alone; a social frame of reference is necessary. An analysis of suicide indicates the proper method of relating psychology and sociology, and Durkheim's approach is accepted. There is a "pluralism of selves" which is a "reflection of the pluralism of Groups." Essentially individual behavior is regulated by the specific role one takes at any given time. Cultural phenomena are held to be rhythmic and cyclic and, to be of three types: Sensate, Ideational and Idealistic.—*R. A. Littman*.

4051. Zander, Alvin F. (*Springfield, Mass.*) Role playing: a technique for training the necessarily dominating leader. *Sociometry*, 1947, 1, 225-235.—"Although most work in developing methods of leadership training has been concerned with democratizing the leader, and it is important that this con-

tinue, there is a need for human relations training of the necessarily dominating leader. This paper describes a brief method for the use of role-playing in training dominating leaders to work with their men as human beings. The brevity of the course made it necessary to concentrate on developing insights rather than allowing practice in specific leadership skills. The values, limitations, and difficulties in the use of this method are described."—*R. B. Ammons.*

#### METHODS AND MEASUREMENTS

4052. Guttman, Louis. Scale and intensity analysis for attitude, opinion, and achievement. In Kelly, G. A., *New methods in applied psychology* (see 21: 4140), 1947. Pp. 173-180.—The author's theory of scale analysis (see 18: 3008) affords a rigorous method for analysing the internal consistency of attitude and opinion scales and the uniqueness of factors involved in the questions of such scales. The problem of bias in attitude measures is approximately quantified by the technique of intensity analysis. 15-item bibliography.—*C. M. Louitt.*

4053. Link, Henry, C. (*Psychological Corp., New York.*) Some milestones in public opinion research. *J. appl. Psychol.*, 1947, 31, 225-234.—After considering various forms of public opinion research and mentioning important workers in this field, the author delineates the development of the Psychological Barometer—conducted by the Psychological Corporation—and discusses the following topics: How many interviews are necessary for results of a certain accuracy; the Literary Digest Poll; the Fortune, Gallup and Crossley Polls; milestones in the literature; the experimental development of the questionnaire; influence of the questionnaire form on poll results; international polls of public opinion; the Scientific Institute of Mexican Opinion; The National Opinion Research Center. 22 references.—*H. Hill.*

#### CULTURES AND CULTURAL RELATIONS

4054. Derrick, Edith W. (*Blackwater Day School, Coolidge, Ariz.*) Effects of evacuation on Japanese-American youth. *Sch. Rev.*, 1947, 55, 356-362.—The effects of a 3-year residence at a relocation center upon the cultural development, attitudes, personality, and achievements of a group of Japanese-American youths, ages 12-19, were assessed in an inventory taken in May, 1945. Significant changes in behavior patterns within the 4 designated areas were noted, together with the basic causes for these responses. Many of the reported developments were of an unfavorable nature.—*R. C. Strassburger.*

4055. Herskovits, Melville J. Problem, method and theory in Afroamerican studies. *Afroamerica*, 1945, 1, 5-24.—Three elements in the scientific study of the New World Negro and his African background are discussed. First, the field is defined and delimited. Secondly, the author sets forth some of

the methodological concepts and techniques that have been successfully employed, notably, the ethnohistorical method and a scale of intensity of Africanisms. Thirdly, attention is drawn to some of the hypotheses which have guided investigation and developed out of experience in the field, namely, (1) the principle of *syncretism* or the tendency to identify those elements in the new culture with similar elements in the old one, enabling the persons experiencing the contact to move from one to the other, and back again, with psychological ease; (2) the principle of *reinterpretation* of the old in terms of the new; (3) the hypothesis that in situations involving change cultural imponderables are more resistant to alteration than are those cultural elements of which persons are more conscious.—*F. C. Sumner.*

4056. McCartney, James L. Paradise lost: the psychology of the Marshall Islanders. *J. clin. Psychopath.*, 1947, 8, 405-421.—The author describes the customs and beliefs of the native Marshall Islanders after living with them for a period of 8 months. He describes such tribal customs as matrilineal inheritance, nudity, free love, incest, maturity, marriage, child bearing, religion, death and burial. Despite the fact that Western civilization permeated these islands almost 100 years ago the natives have been relatively uninfluenced by "Christianity." The author suggests that the obvious lack of functional psychoses among the Marshall Islanders may well be caused by the fact that in the realm of "instinctive" behavior man has been unsuccessful in changing the primitive methods of these people.—*G. A. Muench.*

4057. Peak, Helen. (*Connecticut Coll., New London.*) Observations on the characteristics and distribution of German Nazis. *Psychol. Monogr.*, 1945, 59, No. 6. Pp. 44.—Based on material collected in the summer of 1945 by The Morale Division of the U. S. Strategic Bombing Survey, this report presents analyses of an interviewing survey of 3700 German civilians in all occupation zones except the Russian. Nazi sympathies were estimated by (1) interviewers' "Black," "Gray," or "White" ratings on the basis of ideas expressed during the interview, and (2) affiliation with Party organizations. Tables and discussions portray the relationships between these estimates and sex, age, marital status, religion, economic status, and educational level. Relationships are similarly shown between Nazi sympathies and (1) attitudes of resentment toward the Allies and German leaders, (2) guilt feelings, and (3) concern for community and political problems. Finally, the relationship between party membership and Nazi ideology, as estimated by interviewers, is considered. Correlation coefficients of .50 to .70 are obtained by different methods.—*N. L. Gage.*

4058. Slater, Eliot. A note on Jewish-Christian intermarriage. *Eugen. Rev.*, 1947, 39, 17-21.—Group differences give rise to lack of understanding and this is the basis of hostility. Generally class

hatreds are expressed by a majority toward a minority. If not sponsored, anti-Semitism should cease when group differences disappear, as would largely be the case through wide-scale intermarriage. An inquiry on intermarriage among 50 Jews in the British Army, all in hospital neurosis wards, disclosed the fact that social differences between Jews and non-Jews are disappearing, that Jewish as well as Christian religious dogma is getting less support, that intermarriage has increased to 1 in 8. If maintained for a number of generations, such assimilation would lead to the disappearance of anti-Semitism.—G. C. Schlesinger.

4059. Soper, Edmund Davison. (*Garrett Biblical Institute, Evanston, Ill.*) **Racism; a world issue.** New York: Abingdon-Cokesbury Press, 1947. Pp. 304. \$2.50.—Racism, the doctrine that one group is inherently superior and another inherently inferior by virtue of physical and/or cultural differences, is presented as a world issue in this book, which is based upon reports from seminars and original material by the author. There is sketched for the general reader a bird's-eye view of the background and the status of this dogma in most of the principal countries and colonies; a separate chapter on Negro Americans is included. The basic facts and figures of the biological and social sciences regarding "race" and the peoples of the earth serve as an introduction to the world tour. While slow improvement has been noted, the complete elimination of racism is held to be necessary for world order and stability, and for the security of the numerically inferior white man. A closing appeal is addressed to the Christian church and to all Christians to seek the grace of God in eradicating this malady.—S. O. Roberts.

#### SOCIAL INSTITUTIONS

4060. Bhattacharyya, H. D. **The psychology of nations.** *Indian J. Psychol.*, 1945, 20, 31-42.—Animals which hunt in a pack often fight when they share the kill. Similarly nations that manage to get along during a war disagree when they divide the spoils of battle. The behavior of nations is largely a matter of expedience. Small nations attempt to maintain their possessions and to dominate still smaller nations. Large nations attempt to expand and do everything in their power to prevent nations within their sphere of influence from achieving independent status. To this end they discourage local manufacturing, encourage racial discrimination, and control the newspaper and radio broadcasting facilities.—G. A. Kimble.

4061. Kerstetter, Leona. (*New York U.*) **Role testing for marriage prediction.** *Societry*, 1947, 1, 220-224.—Role testing can serve as a technique through which prospective marriage partners can see each other more clearly in the light of the various roles which they will play in marriage. They can be tested in such roles as host, lover, provider, partner, emotional companion, and homemaker. In playing these out in the psychodramatic situation, each partner comes better to understand himself and the

other. More adequate judgments as to the desirability of marriage can be made.—R. B. Ammons.

4062. McNeill, Harry. **Freudians and Catholics.** *Commonweal*, 1947, 46, 350-353.—The author points out that both Freudianism and Catholicism may profit from careful understanding of the other. On the one hand the Church has developed a system of values through centuries which have as empirical a basis as the pseudo-philosophy of a Freudian ethic. The church provides a *Weltanschauung* which psychoanalysis lacks. On the other hand the Catholic Church must recognize the importance of the unconscious, and the psychoanalytic techniques of investigating it; the mechanism of projection is evident in the Church's attitudes; Catholics must avoid overdoing "the sense of guilt and the feeling of sinfulness"; and it should meet the problems of sex more realistically and with less negativeness. Further, the psychology of the Catholic tradition fails to take into account our present knowledge of developmental and differential psychology.—C. M. Louttit.

4063. Mitra, Suhrit Chandra. **Factors determining changes in religious phenomena.** *Indian J. Psychol.*, 1945, 20, 61-68.—Religion is a social phenomenon resulting from a complex pattern of a number of factors, subjective and objective. A change in any of these variables will necessarily bring about a change in the total Gestalt of religion. Of such factors, one of the most important is the influence of leadership.—G. A. Kimble.

#### SOCIAL ACTIONS

4064. Kehm, H. D. (*U.S.A. Command and Staff Coll., Fort Leavenworth, Kans.*) **Organization for military psychological warfare in ETO.** *Milit. Rev., Ft Leavenworth*, 1947, 26, No. 11, 10-15.—In the second article in his series on psychological warfare Colonel Kehm outlines the administrative organization of the psychological warfare program in the European theater. This includes the structural set-up at SHAEF, in several army groups, and within the Field Army.—M. A. Seidenfeld.

4065. Kehm, H. D. (*U.S.A. Command and Staff Coll., Fort Leavenworth, Kans.*) **Can psychological warfare pay its passage?** *Milit. Rev., Ft Leavenworth*, 1947, 26, No. 12, 35-45.—The third and final article on psychological warfare, (see 4064) summarizes the methods by which the effectiveness of psychological warfare can be estimated. ". . . neither a favorable time relationship between the employment of psychological warfare and the taking of prisoners, nor the presence of leaflets in the hands of prisoners is a reliable gauge of the effectiveness of psychological warfare operations." The use of interrogation is effective but the most satisfactory gauge is the degree to which the enemy uses counter-measures. The author definitely feels that psychological warfare did an effective piece of work but better and more training in this branch of warfare will make it useful whenever it is required.—M. A. Seidenfeld.

4066. McLain, Raymond S. **Intangible factors in combat.** *Milit. Rev., Ft Leavenworth*, 1947, 26, No. 12, 3-12.—Emphasis is placed upon the importance of flexibility in the application of doctrine. The role of *combat judgment* is influenced by "the mentality, then education, and finally there must be experience." Teamwork concepts have been emphasized but the author points out that "adherence to the doctrine of teamwork should not be permitted to invalidate some of the basic principles applicable to factors in the team." Leadership is a third topic receiving consideration and General McLain believes that rapid training courses are unlikely to produce effective leaders. He considers "the basic factor of leadership is innate." Other topics including speed, supervision, rumors and will power are briefly discussed as experienced by this battle commander.—*M. A. Seidenfeld.*

4067. Moreno, Florence B. (*Psychodramatic Inst., Beacon, N. Y.*) **Psychodrama in the neighborhood.** *Societry*, 1947, 1, 168-178.—A method for lessening community tensions is reported as applied in one location. Bases for misunderstandings are discovered and critical scenes acted out. One series of such scenes is reported. Effects are achieved through audience insight and better understanding by parents and children of their own underlying feelings.—*R. B. Ammons.*

4068. Moreno, J. L. **Editorial: International societry and the United Nations Organization.** *Societry*, 1947, 1, 145-147.—The credo of the typical social scientist is based on (1) the myth of one world, (2) the myth of the insufficiency of the social sciences to deal with the present social emergency, and (3) the myth of a research panacea. It is imperative that social scientists learn to make their own small groups work better. The key to progress is "action in situ." "The social units which are formed by scientists themselves in behalf of societal goals should be sociometrically and societally sound and thus lay a brick towards the sociometric foundation of the United Nations Organization."—*R. B. Ammons.*

#### CRIME AND DELINQUENCY

4069. Agreda, M. Jesús. **Examen fisio-psíquico de Benilda Suárez Monsalve, sindicada del delito de incendio.** (*Psychophysical examination of Benaldia Suárez Monsalve, accused of incendiarism.*) *Rev. Med. legal Colombia*, 1946, 8, Nos. 45-46, 111-125.—The psychiatric and psychological examination of a women accused of arson is reported in detail.—*F. C. Sumner.*

4070. Arieff, Alex J., & Bowie, Carol G. (*Psychiatric Inst., Chicago, Ill.*) **Some psychiatric aspects of shoplifting.** *J. clin. Psychopath.*, 1947, 8, 565-576.—Approximately 25% of arrested shoplifters from Chicago's Municipal Court are referred for psychiatric examination. The authors have found that the value of the articles taken by this group is usually small and of little value to the patient. The majority of patients are women and

the ages most involved are the early immature and the middle age. Of 338 patients, 77% had some definite mental or emotional disorder. The most frequent diagnosis being acute anxiety state with mental depression. However, marital discord, low economic level, or low intellectual level were not significant etiological factors. In fact, shoplifters were distributed over the entire city area indiscriminately and with no emphasis in any area.—*G. A. Muench.*

4071. Ash, Philip. (*American U., Washington, D. C.*) **The discrepancy between reported schooling and tested scholastic ability among adolescent delinquents.** *J. appl. Psychol.*, 1947, 31, 323-328.—A comparison of reported schooling completed with scores of "scholastic ability" on the Otis Classification Test, Part 1, was made for a group of 85 white male delinquents, 16 to 22 years of age. Reported schooling completed was also compared with verified schooling completed. Reported schooling was 2.07 years higher than tested scholastic ability. In conjunction with the above finding, an average difference of .49 years between reported and verified schooling completed is taken as evidence that delinquents are often "pushed" through school faster than their abilities would warrant.—*H. Hill.*

4072. Bromberg, Walter. **Emotional immaturity and antisocial behavior.** *J. clin. Psychopath.*, 1947, 8, 423-452.—The relationship of emotional maturity and antisocial behavior is discussed and the generalization is made that emotional stresses in the early life of an individual bear a causal relationship to later adoption of delinquent behavior. The emotional stresses generally arise from the conflict between the infants "instinctive" tendencies and the parents wishes which are first intolerable to the infant, but later acceptable. The ultimate acceptance of society's requirements for adjustment by the young organism depends largely upon the emotional atmosphere surrounding the child. The individual who incorporates infantile reactions of hostility to early training into his lifelong pattern of behavior is classified as a psychopathic personality. The immature attitudes which originate in the neurotic roots of the personality may then undergo consolidation into characteristic group feelings and develop into an emotionally immature group.—*G. A. Muench.*

4073. East, W. Norwood. **The non-sane non-insane offender.** *Eugen. Rev.*, 1947, 39, 6-16.—Three groups of non-sane non-insane offenders—subnormals, psychopathic personalities, and psychoneurotics—are considered from the point of view of causation, ascertainment, responsibility, and treatment. Offenders in these borderline groups are likely to be repeaters. Persistent criminality stems from habit, imperfect development of character, economic insecurity, and lack of religious education. The boundary line between normal and subnormal or between psychoneurotic and insane is often ill defined. Abnormal behavior arises when certain innate tendencies are over charged, or if social

adjustment is thwarted, or when self-control is lacking. When the behavior is prohibited by law, this becomes crime. Various types of aberrant personalities are discussed. The psychiatrist must satisfy the court as to the insanity of the accused, but it is the jury that decides as to his responsibility before the law. The psychiatrist suggests appropriate measures for rehabilitation of the individual for which a special penal-hospital institution is recommended. Longer sentences may be required, which would, at the same time, have some eugenic value in that they would restrict fertility.—G. C. Schwesinger.

4074. Fajen, Elizabeth. Curing delinquency at the source. *Surv. Midmon.*, 1946, 82, 261-262.—An attempt to show that it is possible to identify at an early stage symptomatic difficulties which later might become serious and to plan treatment service which will remove or modify these difficulties was developed in a New York City public school. In this demonstration 19 children about whom the principal of the school and the classroom teachers were worried served as subjects. Procedure and preliminary results are described briefly.—(Courtesy *Child Developm. Abstr.*)

4075. Hirning, L. Clovis. Genital exhibitionism, an interpretive study. *J. clin. Psychopath.*, 1947, 8, 557-564.—Cases of so-called indecent exposure were found to be most numerous of any sex offense at the Grasslands Hospital, New York State. In analyzing and comparing this group of sex offenders with other sex offenders, certain conclusions have been reached. An excessively proper attitude toward sexual matters is a fairly constant finding. These individuals are sexually, and otherwise, timid and insecure. There is a relationship of genital exhibitionism to masturbation, and the former seems to act as a reassurance against castration anxiety. The relationship of genital exhibitionism to an exaggerated Oedipus complex and to scopophilia is also discussed. The absence of genital exhibitionism in women is discussed in relation to the tendency of women to expose other parts of the body as a protective displacement from their castrated state.—G. A. Muench.

4076. Hulbert, Harold S. EEG—electroencephalography. *J. crim. Law Criminol.*, 1947, 37, 491-497.—A description, explanation, and examples of electroencephalograms are presented. Its use clinically is to make or confirm the diagnosis of the various forms of epilepsies, to localize brain tumors, and to verify the presence or absence of brain injury or disease. EEG studies are indicators of what medications, diets, and activities are most suitable for treatment.—V. M. Stark.

4077. Leonardo, Richard A. (*Coroner, Madison County, Wampsville, N. Y.*) Criminal psychopaths and the electro-encephalogram. *Med. World, N. Y.*, 1947, 65, 101-104.—Attention is called to the resemblance in the electroencephalograms of epileptics, between seizures, and of psychopaths and to the remarkable similarity in personality traits of

epileptics and psychopaths. At times symptoms in psychopaths are seen which indicate disorders of consciousness. Studies have shown that the electroencephalographic abnormalities found in behavior problem children are similar to those found in psychopaths. Among criminal psychopaths the few studies made up to the present time indicate that 75% or more have abnormal brain waves. The author sees in the close relation of epilepsy and psychopathy the likelihood of treatment of the psychopath with sodium dilantin or other methods employed in the treatment of epileptic, combined with psychotherapy.—F. C. Sumner.

4078. Leóngómez Amador, Arturo. Concepto psiquiátrico sobre una personalidad psicopática. (Psychiatric opinion on a psychopathic personality.) *Rev. Med. legal Colombia*, 1946, 8, Nos. 45-46, 133-139.—The detailed psychiatric examination and report on a young male embezzler whose behavior was the instability of the psychopath.—F. C. Sumner.

4079. Meyer, Alvin F., Apfelberg, Benjamin, & Sugar, Carl. (*U. S. Marine Hospital, Ellis Island, N. Y.*) Men who kill women. Part II. *J. clin. Psychopath.*, 1947, 8, 481-517.—The histories of 10 men who murdered women have been classified in 3 groups: psychopathic, character-neurotic, the involutionary murders; and the psychotic regressives. Although there were obvious differences in each of these groups, there were also similarities which were evident. In each of the cases, rationalized justifications, such as considering the women as threatening agents who invited or forced their own destruction, were evident. In short, each of these men could be considered paranoid, although only half of them were actually psychotic. The murderer's real quarrel is with himself and he attributes to his victim motives that originate in his own repressed wishes. The murderer's projections do not succeed in freeing him from anxiety and do not diminish his guilt; but in killing, he finally attempts to destroy physically what he cannot symbolically nullify. In this sense murder is self-destructive. 17 references (see 20: 3770).—G. A. Muench.

4080. Reid, John E. (*Chicago (Ill.) Police Scientific Crime Detection Laboratory.*) A revised questioning technique in lie-detection tests. *J. crim. Law Criminol.*, 1947, 37, 542-547.—Experience at the Chicago Police Scientific Crime Detection Laboratory has pointed to several distinct advantages of the revised questioning technique over the technique generally employed. The "comparative response" and "guilt complex" questions afford better criterion of a subject's responsiveness than the usual "card control test."—V. M. Stark.

4081. Robinson, Louis N. Contradictory purposes in prisons. *J. crim. Law Criminol.*, 1947, 37, 449-457.—Changes for the better in prison life have influenced the prisoner, but a real attack on recidivism has yet to be made in the prisons. The solution is seen to lie in accepting the idea that the warden's first and foremost task is the reeducation

of the prisoners. His staff should be hired with that in mind and if coercive control is necessary it should be exercised by others.—*V. M. Stark.*

4082. Sánchez, Luis Jamie. *Aplicación del psico-diagnóstico de Rorschach en psiquiatría clínica y forense.* (Application of the Rorschach psychodiagnosis in clinical and forensic psychiatry.) *Rev. Med. legal Colombia*, 1946, 8, Nos. 45-46, 86-110.—

The author maintains the Rorschach is of incomparable value as an aid in psychodiagnosis when preceded by a clinical examination and demonstrates by means of three cases its usefulness following clinical observation of the patient. Case I is a youth of 23 with "impotencia coerulea" of one year's standing who previously had indulged in homosexuality and then for several years in masturbation. The Rorschach revealed him of median intelligence, of introverted personality, of depressive-timid constitution and as predisposed to short-circuit reactions and anxiety. Case II is a man who having been struck on the head by a falling brick was suing the owner of the building for an exorbitant amount. He complained of almost complete amnesia, pains, anxiety, unmotivated fear, and nocturnal terrors which prevent him from exercising his profession. The Rorschach given twice revealed both times the absence of the signs which Piotrowski considers as pathognomonic of the real organic state of a traumatism. Case III is that of a prisoner who developed suddenly mental perturbations with motor agitation, auditory hallucination, and delusion of grandeur. It is thought that he is simulating insanity in order to be transferred to an asylum from which he hoped to escape. The Rorschach revealed a sound mind with tendencies to utilitarian fabulation. Full results of the Rorschach are reproduced in each case.—*F. C. Sumner.*

4083. Schmideberg, Melitta. *Psychological factors underlying criminal behavior.* *J. crim. Law Criminol.*, 1947, 37, 458-476.—Criminals are subdivided into five types: (1) the ordinary man who is driven to crime by overwhelming external circumstances. (2) the apparently normal individual who is carried away by an irresistible impulse. (3) the neurotic criminal who is driven by equally irresistible but unconscious forces. (4) the genuine criminal who prides himself on the delinquent exploits in which he expresses his anti-social attitude; (5) lastly, a group of criminals whose behavior is the result of mental deficiency or organic illness. Society owes the criminal the attempt to understand him. Social factors cannot be separated from psychological problems. Many improvements are needed in the field of prevention, treatment, and after care.—*V. M. Stark.*

4084. Spirer, Jess. (*U. Miami, Fla.*) *The use of progress reports in prison.* *J. crim. Law Criminol.*, 1947, 37, 484-490.—The use of progress reports as part of the classification procedure is discussed. This official record should offer a clear picture of the initiative the prisoner has displayed toward rehabilitation and his general adjustment.—*V. M. Stark.*

4085. Uribe Cualla, Guillermo. *Personalidad psicopática de un homicida.* (Psychopathic personality of a murderer.) *Rev. Med. legal Colombia*, 1946, 8, Nos. 45-46, 146-159.—Report of the psychological and psychiatric examination of a young man who had murdered a young girl for pay, and who exhibited severe mental disorder when incarcerated.—*F. C. Sumner.*

4086. Werthan, Frederic. *Medico-legal report on a deserter.* *Amer. J. Psychother.*, 1947, 1, 189-192.—This is a case report of a soldier who had been sentenced by a Court Martial to 70 years in jail. The author's examination led him to the conclusion that the patient had been suffering from schizophrenia for several years previous to his induction into the army and was therefore not amenable to disciplinary action.—*E. M. L. Burchard.*

4087. Wood, Arthur Lewis. (*Bucknell U., Lewisburg, Pa.*) *Minority-group criminality and cultural integration.* *J. crim. Law Criminol.*, 1947, 37, 498-510.—A comparison study of crime in various cultural groups made. Its purpose is to survey the evidence for variability in minority-group crime rates and to test certain hypotheses concerning their explanation. The evidence available suggests that cultural and social integration, sometimes influenced by economic conditions and persecution, are closely related to the magnitude of crime rate.—*V. M. Stark.*

4088. Zülliger, Hans. *Die psychologische Betreuung der Strafgefangenen.* (The psychological care of convicts.) *Gesundh. u. Wohlf.*, 1945, 25, 410-419.—Psychologically grounded care of convicts is to be understood in the sense of mental hygiene, and has as its goal the prevention of recidivism on the part of those released. He who practices mental hygiene must himself possess mental equilibrium, hence the necessity of a very careful selection of the lower custodial personnel with which the convicts come into constant contact. The author suggests as an auxiliary organization the establishment of a "medicopsychological service for penal institutions" which operates necessarily in an ambulatory fashion from a central point. The period of imprisonment should be determined less by the nature of the crime than by the subjective condition of the criminal in relation to his subsequent training.—*F. C. Sumner.*

#### ART AND AESTHETICS

4089. Greene, Theodore M. (*Yale U., New Haven, Conn.*) *The problem of meaning in music and the other arts.* *J. Aesthet.*, 1947, 5, No. 4, 308-313.—Here is to be found another attempt to settle the differences of the formalists and expressionists, and the functionalists and interpretationists.—*P. R. Farnsworth.*

4090. Mainwaring, James. *The assessment of musical ability.* *Brit. J. educ. Psychol.*, 1947, 17, 83-96.—Review of representative inquiries into the nature of musical ability and the techniques for its assessment reveals a marked divergence of views

which suggests the need for simplification and coordination of such research. The structure of musical ability is here conceived as consisting of a number of independently variable abilities which are regarded as specific manifestations, in musical material, of a general esthetic factor and of general intelligence. Since musical ability is defined as natural aptitude for musical training, its measurement must embrace all of the abilities relevant to the training or learning process. Developed general musicianship manifests 6 essential aspects, natural aptitude for which can be assessed for the most part in the early years of the infant-school.—R. C. Strassburger.

4091. Perry, Isabella H. (*U. California Med. Sch. San Francisco.*) Vincent Van Gogh's illness. *Bull. Hist. Med.*, 1947, 21, 146-172.—Much speculation has existed as to the nature of the mental illness from which Vincent Van Gogh suffered. Diagnoses have ranged from epilepsy, made at St. Remy where he was interned, to postmortem ones such as chronic sunstroke, intoxication (from drinking turpentine and kerosene), alcoholic intoxication, syphilitic paresis or meningo-encephalitis, schizophrenia, manic-depressive psychosis. The author believes from an intensive study of Van Gogh's family history, personal history, letters, and painting that the best diagnosis of the artist's ailment is that of a cyclothymic personality with episodes of depression and mania.—F. C. Sumner.

4092. Rannells, Edward Warder. (*U. Kentucky, Lexington, Ky.*) Aesthetic expression and learning. *J. Aesthet.*, 1947, 5, No. 4, 314-320.—The familiar sequence—preparation, incubation, illumination and verification—said to characterize creative ability developed in scientific research is not characteristic of that developed in aesthetic behavior. The author stresses learning through expression which he terms externalization.—P. R. Farnsworth.

[See also abstracts 3802, 3805, 3901, 3964, 4011, 4012, 4018, 4019, 4021, 4030, 4036.]

#### PERSONNEL PSYCHOLOGY

4093. Bavelas, Alex. (*Massachusetts Inst. Technology, Cambridge, Mass.*) Role playing and management training. *Societry*, 1947, 1, 183-191.—Although management is ordinarily very proficient in the technical aspects of its job, human relations methods are in general poorly developed. It is suggested that role-playing offers an opportunity for acquiring and practicing necessary social skills. An example is given showing how the method might be applied in a foreman training period.—R. B. Ammons.

4094. Bechtoldt, H. P., Maucker, J. W., & Stuit, D. B. The use of order-of-merit rankings. In Kelly, G. A., *New methods in applied psychology* (see 21: 4140), 1947. Pp. 26-33.—Various methods of obtaining an adequate criterion of shipboard com-

petence for several naval ratings are discussed. An order-of-merit ranking by supervising petty officers was found to satisfy the requirements best, at least in the sense that it had fewer undesirable limitations.—C. M. Louttit.

4095. Bennett, George K., & Wesman, Alexander G. (*Psychological Corporation, New York.*) Industrial test norms for a southern plant population. *J. appl. Psychol.*, 1947, 31, 241-246.—Believing that national test norms are not as valuable as local norms, or norms based on a population similar to the one being tested, the authors present area norms for several tests. Male and female, southern, adult white applicants for office and plant work were given the following tests (from the results of which the norms were derived): Bennett Mechanical Comprehension Test Form AA, Revised Beta Examination, Hand-Tool Dexterity Test, Minnesota Vocational Test for Clerical Workers.—H. Hill.

4096. Brimhall, Dean R., & Franzen, Raymond. A preliminary study of physical standards in relation to success in flight training. (CAA Div. of Res. Rep. No. 26, 1944: Publ. Bd. No. M 50304.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 80. \$2.00, microfilm; \$6.00, photostat.—In this study the standards of acceptance for measures of pulse, systolic and diastolic pressure, and visual acuity in the worst eye were investigated with respect to success in flight training. There was little, if any, association between the approximate levels of acceptance now employed by the American Air Forces and the incidence of failure in flight training. It was also demonstrated that certain other factors (height, weight, chest circumference, body build, elasticity of arterial walls, the amount the cadet smokes or drinks, etc.) would not distinguish the cadets who passed flight training from those who were failed.—(Courtesy *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

4097. California, University. Division of War Research. The relative movement test in Sonar officer selection. (1944; Pub. Bd. No. 58207.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 16. \$1.00, microfilm; \$2.00, photostat.—The Navy Sonar job is described with respect to the needs for navigational visualization. The requirements for an adequate visualization test are outlined. Samples of the test items are presented, and the procedure for reaching an appropriate difficulty level is described. Validation coefficients, reliability correlations, and distribution curves show the statistical data on the Sonar officer level, with an indication that the device is useful as a partial predictor in a multiple battery of tests for Sonar officer selection, and may also be extended to other Navy specialties which require navigational visualization. Follow-up studies appear to be warranted for the purpose of establishing the degree to which this aptitude is the result of special training, or is an innate ability largely uninfluenced by navigational practice.—(Courtesy of *Bibl. scient. industr. Rep., U. S. Dep. Commerce*).

4098. Faulkner, R. N. Postwar military psychology. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 251-255.—The military has very much less knowledge concerning its personnel and their behavior than it has about its materiel. Because wars are fought by men, not machines, there is very real need to correct the situation. Characteristics of military personnel research are outlined under the major category of staff, program, and administration.—C. M. Louttit.

4099. Ferguson, Leonard W. (*Metropolitan Life Insurance Co., New York.*) The development of a method of appraisal for assistant managers. *J. appl. Psychol.*, 1947, 31, 306-311.—The development of forms for appraisal of Metropolitan Life Insurance Company assistant managers is described. Intercorrelation for different samples between two sets of 52 selected items for 1008 cases was .95. Odd-even reliability based on all cases was .93, which gave .96 when corrected for double length. Validity, as determined by correlating appraisal scores with certain criterion scores for all cases, was .52 when corrected for attenuation. For this type of appraisal the results proved very satisfactory.—H. Hill.

4100. Flanagan, John C. Plans for aviation psychology in the Army Air Forces. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 255-258.—The tentative plans for continued psychological research in the Army Air Forces are outlined.—C. M. Louttit.

4101. Fox, Vernon. (*State Prison, Jackson, Mich.*) A study of the promotion of enlisted men in the Army. *J. appl. Psychol.*, 1947, 31, 298-305.—As counselor, the author gathered data on 500 consecutive soldiers (ranging in rank from private to master sergeant) prior to their return to civilian life. Correlations between rank and various test scores and several other factors indicate that rank, in the branches of the service investigated, bore little relation to factors studied. Mechanical aptitude, AGCT scores, and grade completed showed correlations with rank of .33, .28, and .23 respectively. Volunteers held statistically significant higher ranks than draftees.—H. Hill.

4102. Ghosh, Rabi. Advantages of selection methods in choosing personnel for service. *Indian J. Psychol.*, 1945, 20, 73-75.—The use of psychological tests in the selection of employees has the advantage of providing an efficient and objective means of choosing personnel. The tests, however, may not be so useful for jobs in which employer-employee contacts are frequent. For such jobs an interview by the employer is advised.—G. A. Kimble.

4103. Ghosh, S., & Ghosh, G. Mental testing on war technicians. *Indian J. Psychol.*, 1945, 20, 92-94.—A battery of tests were administered to 251 technicians of 8 different types. Results indicate that 30% of the technicians have not profited by their training opportunities.—G. A. Kimble.

4104. Harrell, Thomas W. (*U. Illinois, Urbana.*) Use of civilian skills in the Army Air Forces. *Science*, 1947, 106, 26-28.—Data are presented for 9 occupations which reveal how men with these occupational skills were used in the Air Service Command. There were 200 men studied for each occupation, 100 each whose civilian occupation was one of the 9 and 100 each who were assigned to these military specialties. Records were kept as to whether the military use of these men in relation to their civilian occupation was close, moderate, or none. There is considerable variation, from 28 civilian carpenters in close or moderately close military jobs, to 98 tabulating machine operators in close or moderately close military jobs. As regards military specialties, the range was from 29 cook-bakers to 93 for tabulating machine operators. By and large, there is no general result apparent. As the author remarks: "Statistics such as those in Table I cannot prove why one civilian skill would be neglected in only 2 per cent of the cases while another skill would be neglected in 72 per cent of the cases. These data do indicate that where, for some reason, sufficient pressures exist, civilian skills can be utilized almost perfectly."—F. A. Mote.

4105. Hay, Edward N. (*Pennsylvania Co., Philadelphia.*) Postscript to predicting success in machine bookkeeping. *J. appl. Psychol.*, 1947, 31, 235.—In an earlier article (see 18: 1877) the author reported upon the validation of tests for predicting success in machine bookkeeping. The present paper presents results of employing operators through use of selection tests. Substantial improvement is evidenced from the time this policy was inaugurated in 1937.—H. Hill.

4106. Jenkins, J. G. The future of research in naval aviation psychology. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 258-260.—Brief comments on the possible future of psychological research in the Navy.—C. M. Louttit.

4107. Jensen, Milton B. (*2306 Alta Ave., Louisville, Ky.*), & Rotter, Julian B. (*Ohio State U., Columbus.*) The value of thirteen psychological tests in officer candidate screening. *J. appl. Psychol.*, 1947, 31, 312-322.—Thirteen tests were investigated in regard to their value as selective devices in an Officer Candidate School. Statistically significant differences were found between the scores of officers and those obtained by officer candidates on the Personnel Test (Wonderlic modification of the Otis Self-Administering Tests of Mental Ability, Higher Examination), Arithmetic Computation (Stanford Achievement Test, Advanced), and the test of Mechanical Comprehension, Form AA. The Arithmetic Computation and combined Paragraph Meaning and Word Meaning of the S.A.T., and the Personnel Test gave the most efficient combination for predicting academic success. Suggestive findings on the Army General Classification Test, the Group Level of Aspiration Test, and several other tests are discussed.—H. Hill.

4108. Lippitt, Ronald. (*Massachusetts Inst. Technology, Cambridge, Mass.*) Administrator perception and administrative approval: a communication problem. *Societry*, 1947, 1, 209-219.—In attempting to put across to administrators the need for improving the plant pattern of human relationships, it was found that visits to the administrator's office and group presentation of the problem in the presence of administrators did not work. A socio-drama of an important situation with guided perception and interpretation seemed to "stimulate interest, create understanding, and stir up action minded motivation."—R. B. Ammons.

4109. Longley, Alfred C. (*U. S. A. Command and Staff Coll., Fort Leavenworth, Kans.*) Counseling for the soldier. *Milit. Rev., Ft Leavenworth*, 1947, 26, No. 11, 46-50.—A chaplain's description of the use of "non-directive" counseling in solving the problems of military personnel. In the military service the Chaplain is expected to be a trained counselor. Close co-operation between the Chaplain, the company commander, and the medical officer (psychiatrist when available) is indicated.—M. A. Seidenfeld.

4110. MacKinnon, Donald W. (*Bryn Mawr Coll., Bryn Mawr, Pa.*) Some problems of assessment. *Trans. N. Y. Acad. Sci.*, 1947, 9, 171-185.—As an illustration of the method of "assessment," by which personnel for positions of high responsibility may be selected, the 3½-day evaluation of OSS candidates is described. During this time, each group of 6 candidates was given some 75 scores and ratings by a team of 3 staff members, many based upon group situational tests, formal and informal. Throughout the program the trend was away from the elementaristic approach to personality and toward a holistic or organic conceptualization of the person. At all times the attempt was made to achieve an interpretative synthesis of all data. Very often specific ratings of separate variables were changed in staff conference to conform to the more general evaluation note. Problems and implications are discussed of this attempted integration of the nomothetic and ideographic methods.—F. W. Finger.

4111. Murray, H. A. Assessment of the whole person. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 55-60.—The methods of assessment at one of the 6 centers established by OSS are described. Candidates were evaluated, in respect to anticipated specific assignments, on the basis of their observed behavior during a 3 day testing period. During this period observations were made of behavior on structured and unstructured formal tests, in situational tests, and during supposedly test free time, e.g., meals or recreation.—C. M. Louttit.

4112. Richardson, M. W. Personnel psychology. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 248-251.—As his contribution to a symposium on future developments in military psychology Richardson raises 4 questions concerning the future of personnel work in the Army.

These questions, which are raised but not answered, are: do the armed services need psychological services; how should such a service be organized; should it have military or civilian personnel; and finally the disadvantage of personnel policies not having been based on the results of personnel investigations, but an administrative expediency.—C. M. Louttit.

4113. Richardson, M. W. Selection of Army officers. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 79-85; 86-89.—Especially devised instruments—Officer Evaluation Report, Biographical Information Blank, and Interview—were shown to be of value in differentiating between good, average, and poor company grade officers so classed by ratings of all fellow officers in the rates' own unit. A validity coefficient of .76 was found between combined scores on the 3 instruments and the criterion ratings. The Officer Classification Test and the General Survey Test were not related to the criterion.—C. M. Louttit.

4114. Roy, S. N. (*Calcutta U., India.*) Psychological analysis of the vocation of a mechanic. *Indian J. Psychol.*, 1943, 18, 50-54.—In an attempt to discover the psychological characteristics of successful mechanics, a battery of tests was administered to a number of mechanics. The following characteristics are suggested as representative of mechanics in general: abstract intelligence below average, concrete intelligence slightly above average, good understanding of mechanical relationships, accurate sense of measurement, manual dexterity, accurate perception of forms, kinaesthetic sensitivity, steadiness of movement, and speed without impairment of efficiency.—G. A. Kimble.

4115. Rundquist, E. A. Development of an interview for selection purposes. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 85; 90-95.—In order to determine the possible value of a Board interview to the total procedures for retention of Army officers the function and methods of the interview were specifically described. The purpose of the interview was limited to judgments of the interviewee's interactions in the social setting of the Board meeting. Board members were indoctrinated in the purpose and types of questioning to be done; they interviewed only strangers and had no previous records available. Judgments were recorded independently by each board member on 3 special forms and the group judgment after discussion was recorded on a 4th form. The reliability of the scoring adopted was .87, and its validity was .37. The interview under the prescribed conditions did add to the total selection process.—C. M. Louttit.

4116. Sisson, E. D. The criterion in Army personnel research. In *Kelly, G. A., New methods in applied psychology* (See 21: 4140), 1947. Pp. 17-21.—Ratings, and agreement among experts in the nomination technic were explored as possible criteria for "general soldier performance." Estimated reliability of the first method with enlisted

men approximated .75. A similar reliability was found with a nominatory technic in which officers indicated those of their fellows who were high or low in general competence. Correlation of the order .50 were found between these criteria and a selected test battery in the former case, and with the average of earlier proficiency on ratings in the latter.—*C. M. Louttit.*

4117. Sparks, C. P. Interpretation of Army test data for civilian guidance. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 72-75.—Correlations between the Army General Classification Test and Form 5, Well's revision of Alpha Examination (.90) and the A.C.E., 1942 edition (.79); between the Army Clerical Aptitude Test and the Minnesota Vocational Test for Clerical Workers (.62 and .74); between the Army Mechanical Aptitude Test and the Minnesota Paper Form Board Test (.66) and the Bennett Test of Mechanical Comprehension (.74) were determined on Army populations ( $N = 548$  to 1371). "The relationships . . . are of such magnitude that tables of equivalence can be established which should be of value for civilian educational and occupational guidance."—*C. M. Louttit.*

4118. Stellner, Howard A. (728 Ewing St., Fort Wayne 2, Ind.) Occupational adjustment of psycho-neurotic veterans. *J. Indiana med. Ass.*, 1947, 40, 525-527.—A study of the post-service occupational adjustment of some 218 veterans in Fort Wayne and northeastern Indiana who were discharged from service because of a neurotic illness reveals: (1) a period of 1 to 2 months spent in resting after discharge; (2) 50% held but one job since discharge; (3) 55% were absent from work 10% or less of the possible working time; (4) 17% lost no time from work; (5) 34% were holding same pre-service job; (6) only 5 of those gainfully employed before service were in college at time examined; (7) very few men were using any service-learned skill; (8) low fatigue threshold, irritability, noise sensitivity, backache, and feeling of confinement were principal reasons for job changes; (9) those persisting with same employer requested shorter hours or different assignments; (10) the work record did not reflect the chaotic personal life of some of these veterans; and (11) those who had sought help through psychotherapy reflected an early improvement by a more stable work record.—*F. C. Sumner.*

4119. Tenen, Cora. (U. Manchester, England.) The adolescent in the factory. *Brit. J. educ. Psychol.*, 1947, 17, 72-82.—By means of on-the-job interviews of the free type, the reactions of youths to their initial work experience were assessed. The subjects were employees of two clothing factories, 75 girls and 34 boys in each group, ranging in age from 14 to 18. The large majority reported an eager anticipation of going to work on leaving school at 14. Selection of this particular kind of work was not generally based on knowledge, but resulted from fortuitous circumstances or economic pressure. Initial eagerness was soon displaced by

frustration and disillusionment; dissatisfaction and even resentment were the most prevalent attitudes. Decisive factors in the formation of such adverse attitudes were frustration of the adolescent's desires for satisfactory physical development, for social status in the factory, and for the learning of satisfactory work skills. Such adverse feelings were not outgrown, but rather seemed to rise in intensity with increasing maturity.—*R. C. Strassburger.*

4120. Vaughn, C. L. The nominating technique. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 22-26.—A method of securing a combat criterion involving nomination by Naval pilots of the 2 men with whom they would be willing or pleased to fly wing on, and 2 with whom they would not be willing to so fly. Scores based on this technique gave evidence of value as criteria in the exploratory studies.—*C. M. Louttit.*

4121. Ward, L. B. Criteria of crew proficiency in operational training. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 37-42.—An effort was made to discover measures by which the proficiency of airplane combat crews with stable vs. changing personnel could be compared. No satisfactory measures had been found when the war ended.—*C. M. Louttit.*

4122. Williams, S. B., & Leavitt, H. J. Methods of selecting Marine Corps officer candidates. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 96-99.—A nominatory technique, in which members of a 50 man platoon indicated their first 5 and last choices among the platoon members on 5 characteristics, was compared with the criteria of pass-fail in Officer Candidate School. Of the 5 characteristics only "all-around officer material" was related to the criterion as shown by a biserial correlation of .40.—*C. M. Louttit.*

#### VOCATIONAL GUIDANCE

4123. Baer, Max F. (B'nai B'rith Vocational Service Bureau, Washington, D. C.) Vocational guidance in group activities: distinguishing values and principles. *Occupations*, 1947, 25, 530-534.—Some of the distinguishing values of vocational guidance in group activities are that it provides some orientation for many individuals not otherwise reached; it may indicate those in need of individual attention; it tends to stimulate demand for individual counseling; helps establish rapport for subsequent individual counseling; provides an economical means of imparting information of common interest and value; it offers opportunities for self-evaluation; and provides opportunities for development of positive attitudes and traits. Some principles of vocational guidance in group activities are suggested as: group activities and individual counseling are complementary approaches to the same ultimate objectives, they should be purposeful, democratic in spirit, and adapted to the needs, interests, and maturity level of the groups; the emphasis should be on experience in planning, rather than impartive information.—*G. S. Speer.*

4124. Bennett, Margaret E. (*Pasadena (Calif.) City Schools.*) Meeting contemporary problems in guidance. *Occupations*, 1947, 25, 515-520.—Contemporary problems, briefly discussed, are: analysis of the components of a total vocational guidance service; the integration of vocational guidance with mental hygiene and placement in a broad educational program; a number of problems relating to the techniques of vocational guidance, particularly those developing from experience during the war; and the improvement of standards of training and service.—G. S. Speer.

4125. Donahue, Wilma T., & Eldersveld, Wilma. (*U. Michigan, Ann Arbor.*) Vocational problems of undergraduate university women; report of a questionnaire study at the University of Michigan. *J. higher Educ.*, 1947, 18, 194-200.—In 1943 students at the University of Michigan asked that an aptitude-testing program be provided for them. The replies to 3 questions of a counseling questionnaire answered by 1496 women in the freshman, sophomore and junior years are studied. More than one-third had not made a vocational choice. Students were asked to list any questions they had regarding vocational plans. The need for vocational counseling among undergraduate women is shown by the fact that almost half the students asked questions either seeking information about vocations or expressing indecision about vocational plans. When asked what they considered to be their greatest problem, more than one-fourth indicated that it was the choice of a suitable vocation. The questions mentioned by students indicate that they seek not only information and counseling but also means of determining their aptitudes.—M. Murphy.

4126. Harris, Albert J. (*City Coll., New York.*) Ethical practices in vocational guidance. *Occupations*, 1947, 25, 528-529.—The Ethical Practices Committee of the National Vocational Guidance Association has prepared a statement of minimum standards for vocational guidance. The future activities of the Committee are briefly indicated.—G. S. Speer.

4127. Jager, Harry A. (*U. S. Office of Education, Washington, D. C.*) The George-Barden Act as an influence in the further development of guidance work. *Occupations*, 1947, 25, 483-489.—The George-Barden Act, which authorizes the use of federal funds to reimburse states for vocational guidance activities, is expected to stimulate the development of these activities in about three-fourths of the states. The immediate effects anticipated are the development of new supervisory programs, an emphasis on in-service training of counselors, the examination of duties and qualifications of counselors, and the re-examination of the supply of counselors and the salaries necessary to secure them.—G. S. Speer.

4128. Kendall, William E. (*Syracuse U., Syracuse, N. Y.*) The occupational level scale of the Strong Vocational Interest Blank for Men. *J. appl. Psychol.*, 1947, 31, 283-287.—The following problem was investigated: "if academic ability is held

constant can high, average, and low O.L. [occupational level] groups be differentiated with respect to scholastic achievement." Three groups of entering students at Syracuse University were selected on the basis of their O.L. scores. Median raw scores for the three groups were 117, 18, and -55. Academic ability was measured through administration of the Ohio State Psychological Examination, Form 21. Groups selected on the basis of O.L. scores differed significantly in scholastic achievement, and on scores earned on the O.P.E. When academic ability was held constant differentiation by means of O.L. scores was at a doubtful level.—H. Hill.

4129. Scott, Ira D. (*Vet. Admin., Washington D. C.*) Contributions of the Veterans Administration counseling program to guidance. *Occupations*, 1947, 25, 493-497.—The Veterans Administration guidance program has provided counseling services on a nation-wide scale never before seen, with funds available to make it possible to employ professionally trained personnel to perform counseling, supervise counseling, and train others for counseling. The program has enabled communities to develop guidance facilities and train counselors where they did not exist before.—G. S. Speer.

4130. Steuerwald, Ricardo. La práctica de la orientación profesional. (The practice of vocational guidance.) *Bol. Inst. int. Amer. Prot. Infanc., Montevideo*, 1947, 21, 22-45.—Post war problems have compelled the South American states to be concerned about their human resources. In order to direct these human forces vocational orientation is necessary, and the "Department of Psychology and Vocational Guidance" established in 1942 in San Bernardo is concerned with the matter of directing the program. Vocational guidance is conceived as counseling, not commanding; but the desires of the individual and the needs of the state must be considered. Selection is thought of as a negative process. Evaluation of the individual is done by means of interviews, questionnaires, and tests. Jobs are rated by means of psychograms, each important aspect rated from 1 to 5. Individuals are similarly rated for these factors. A 2.5 hour testing program and a 40 minute interview are included in the total 5-hour evaluation. There is included a detailed description of the tests used, areas of measurement, reproduction of 4 forms, and the plan of organization of the department.—R. J. Corsini.

4131. Stocking, Collis. (*U. S. Employment Service, Washington D. C.*) Contributions of U.S.E.S. to guidance and personnel problems. *Occupations*, 1947, 25, 500-503.—Major contributions of U.S.E.S. have been public employment counseling, development of the *Dictionary of Occupational Titles*, development of oral trade questions and of aptitude tests, and various types of labor market information.—G. S. Speer.

4132. Trabue, M. R. (*Pennsylvania State Coll., Pa.*) War-born problems of N.V.G.A.: 1944-46. *Occupations*, 1947, 25, 520-526.—In this period of unrest it is important that individuals and com-

munities (a) have attitudes of respect, consideration and helpfulness toward each other, (b) understand each other, and (c) develop skills of working together cooperatively. It is felt that the attitudes are the basic factors.—*G. S. Speer.*

4133. Wrenn, C. Gilbert. (*U. Minnesota, Minneapolis.*) Trends and predictions in vocational guidance. *Occupations*, 1947, 25, 503-515.—Vocational guidance services within the past few years are reviewed and appraised. Major trends observed are the expansion of personnel programs and concepts, development and improvement of appraisal techniques used to produce better counseling of the client, growth of the use of group approaches, publication of much significant literature in the field of occupational research, the development of placement services, and advances in professional training and standards of performance. Certain predictions are made about the future: vocational guidance will develop two fields, one a broad guidance service, the other specializing in materials and information on vocations; and increasing proportion of the support of vocational guidance functions will come from public funds; therapeutic counseling will increase, as will attention to environmental factors; there will be a marked step forward in the professionalization of personnel workers; and procedures for evaluation of personnel services will be carefully planned. 59-item bibliography.—*G. S. Speer.*

[See also abstracts 3832, 3853, 3854, 3860, 3877, 3881, 3942, 4013, 4042, 4043, 4165, 4174, 4177.]

#### INDUSTRIAL AND BUSINESS PSYCHOLOGY

4134. Bray, C. W. The future of military research by civilian psychologists. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 264-267.—As a possible basis for prediction of the future use of civilian psychologists in military research the author discusses 5 factors which contribute to the success of the wartime civilian program.—*C. M. Louttit.*

4135. Churchman, C. West, Ackoff, Russell L., & Wax, Murray. [Eds.] (*U. Pennsylvania, Philadelphia.*) Measurement of consumer interest. Philadelphia: University of Pennsylvania Press, 1947. Pp. vi + 214. \$3.50.—A conference on experimental method applied to measurement of consumer interest was held at the University of Pennsylvania in May, 1946. 29 participants presented formal papers or less formal round table remarks at sessions which were held on the following seven major topics: problems in practice, ways of evaluating preferences, the meaning of consumer interest, the meaning of measurement, specifications for consumers' goods, sampling techniques, and application of measurement of attitudes. Primary emphasis was on experimental and statistical techniques, although some papers were less strictly scientific in nature, especially those dealing with the consumer himself.—*R. W. Husband.*

4136. Damon, A. Physique and success in military flying. *Amer. J. phys. Anthropol.*, 1947, 5, 239.—Abstract.

4137. Dunlap, Jack W. Methodology employed in testing aircraft gunsights. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 154-160.—Psychological contributions to training methods and to analysis of achievement in firing aerial guns using a gyro-stabilized free gun sight are described. The methods of investigation utilized only well established experimental and statistical techniques. Further, the results of the test series revealed aspects of the engineering design that had not taken into consideration possible limits of human behavior.—*C. M. Louttit.*

4138. Fitts, Paul M. Psychological research on aviation equipment design principles. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 143-149.—The 2 major types of problem encountered are (1) perceptual, e.g. meter dials, auditory signals, or cathode ray images, and (2) motor, e.g., various types of movements for operating controls. Research methodologies and applications are discussed.—*C. M. Louttit.*

4139. Kappauf, W. E. Consulting services vs. experimentation on problems of the design of equipment for human use. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 165-169.—". . . consulting and experimental contributions during the war resulted in the development of no new psychological methods but in a new experimental emphasis on the psychological problems in the design and operation of equipment." The author mentions examples of design changes suggested on the basis of general psychological principles where experimentation was unnecessary.—*C. M. Louttit.*

4140. Kelly, George A. [Ed.] *New methods in applied psychology*. College Park, Md.: University of Maryland, 1947. Pp. viii + 301.—This volume presents the "Proceedings of the Maryland Conference on Military Contributions to Methodology in Applied Psychology held at the University of Maryland, November 27-28, 1945 under the auspices of the Military Division of the American Psychological Association." There are 37 papers covering all phases of military applications of psychology, each of which is abstracted in this issue.—*C. M. Louttit.*

4141. Lawrence, Merle, & Macmillan, J. W. Human factors in the design, placement, and operation of instruments and controls in aircraft. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 150-154.—Describes the program of research on psychological aspects of instrument design being carried on in connection with Naval aviation.—*C. M. Louttit.*

4142. Marquis, Donald G. Postwar military psychology: summary and recommendations. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 270-275.—The author summarizes the reports on military psychology by

enumerating 8 areas in which work has been done and must be done in the future. How military and civilian agencies may work and cooperate in these areas is discussed.—C. M. Louttit.

4143. Marzi, Alberto. *Psicologia della produzione.* (Psychology of production.) *Produzione*, 1947, 1, 3-4.—The fundamental unit in all production is the human being. All operations and enterprises begin in the mind of man. American industry has realized the value of psychological study of production and employs specialists who screen out applicants without aptitude. In the United States, and in Germany and Russia as well, comprehensive guidance and placement programs well serve the needs of the individual workers but also serve the economic needs of the nation. An example of the value of psychology in industry was shown by Ford's innovation of periodic rest periods during the work-day, which contrary to expectation showed an increase in the total out-put. Progressive industrialists should recognize the economic and social values of psychology in industry.—R. J. Corsini.

4144. Miller, I. Franklin. (412 Medical Arts Building, Pittsburgh 13, Pa.) Applied psychology in the dental treatment room. *Oral Hyg.*, 1946, 36, 238-243.—Psychological techniques for relieving nervous tension of dental patients in two to five hour appointments are suggested.—F. C. Sumner.

4145. Steer, M. D. Testing communication equipment for human use. In Kelly, G. A., *New methods in applied psychology* (see 21: 4140), 1947. Pp. 160-164.—Standard experimental techniques were used in determining the intelligibility efficiency and the pilot acceptance of aircraft communication equipment. Studies were made under laboratory conditions and during flights.—C. M. Louttit.

4146. Taylor, F. V. A three-phase research problem. In Kelly, G. A., *New methods in applied psychology* (see 21: 4140), 1947. Pp. 139-143.—Research in psychological aspects of instrument design involves 3 phases: (1) operational analysis, the first hand study of, and learning to use, the instrument in question, (2) applied research, which includes study of psychological consideration of the particular machine in question, and (3) basic research, having to do with generalization applicable to the instrument in question and to the general class of instruments. Illustrations are taken from work on Navy fire-control equipment.—C. M. Louttit.

4147. Thorndike, R. L. Factors determining errors of navigational position errors. In Kelly, G. A., *New methods in applied psychology* (see 21: 4140), 1947. Pp. 194-198.—Errors in aerial navigation made by students were studied by analysis of data secured from students' navigating over a known 4 leg rectangular course. Factor analysis of 14 variables indicated that speed, wind effect, and heading accounted for the correlations. Of them heading was most important and this depended upon accuracy of determination of compass deviation. This finding has important implications for navigation training and operational doctrine.—C. M. Louttit.

4148. U. S. Air Forces in Europe. Office of the Surgeon. Summary of the activities of the Aero-Medical Research Section, Feb. 1, 1945 to Oct. 15, 1945. (1945: Publ. Bd. No. M 65737.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 989. \$20.00, microfilm; \$66.00, photostat.—This summary was intended to provide a broad overall picture of German aviation medicine, to demonstrate which aero-medical subjects have been studied in Germany and to give an estimate as to what progress has been made in these fields. Information was collected on the following topics: (1) Oxygen and respiration, (2) effects of atmospheric pressure wind blast, (3) forces of acceleration and deceleration, (4) effects of temperature, (5) effects of vibration, (6) orientation in flight, (7) air sickness, (8) rations and water, (9) general medicine and sanitation, (10) psychology and psychiatry, (11) selection of aircrew candidates, (12) training, (13) research in aviation medicine, (14) organization of German air force medical services, (15) medical reporting in the German air force, (16) safety devices, (17) parachutes, (18) body armour and related equipment, and (19) air/sea rescue. The bulk of the document consists of 14 appendices (reports of interrogations of German scientists and personnel, translations of German documents, descriptions of institutions, equipment, therapeutical methods, etc.). The comment is made that a need exists for highly specialized technical personnel to make detailed studies of the various specialties related to German aviation medicine which cannot be made by the more broadly trained people at present in the European Theater.—(Courtesy *Bibl. scient. industr. Rep.*, U. S. Dep. Commerce).

4149. Viteles, M. S. Civilian military research. In Kelly, G. A., *New methods in applied psychology* (see 21: 4140), 1947. Pp. 267-270.—Comments on civilian research of military significance performed in university and other laboratories. Cautions are given against the laboratory becoming too separated from field needs, and against too strict control of research plans. There is the warning that grants for research involve assumption of responsibilities as well as the privileges of expending the money.—C. M. Louttit.

4150. Viteles, Morris S. An historical introduction to aviation psychology. (Div. Res. Rep. No. 4, 1942; Publ. Bd. No. M 50284) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 76. \$2.00, microfilm; \$6.00, photostat.—The following topics are treated: Speed of simple reactions, complex reaction tests, other psychomotor tests, measurement of emotional reactions, tests of intellectual processes, combinations of psychomotor and intellectual test scores, investigation of sensory processes, personality observations, measurement of psychological functions under low oxygen tension, and the decline and revival of aviation psychology. 117-item bibliography.—(Courtesy *Bibl. scient. industr. Rep.*, U. S. Dep. Commerce).

4151. Warner, Lucien. (*Life Magazine, New York.*) & Franzen, Raymond. Values of color advertising. *J. appl. Psychol.*, 1947, 31, 260-270.—Twenty full-page advertisements, 10 in color, 10 in black and white, were judged by 992 respondents, distributed over 3 socio-economic groups and as to age and sex. Two attributes were measured: (1) The comparative values full-page black and white and colored advertising have to enhance and maintain positive influences on consumers. (2) The value of such advertising to intrigue or interest. Results indicate that colored advertising has an advantage in maintaining and increasing the reputation of familiar brands, while color does not seem to be superior for arousing interest.—H. Hill.

[See also abstract 3840.]

#### EDUCATIONAL PSYCHOLOGY

4152. Alsop, G. F. How to recognize psycho-neurotic pupils. *Educ. Digest*, 1946, 11, 44-47.—Alsop discusses what teachers can do to prevent mental breakdowns in school children. 3 classes of recognition are given in terminology understandable to parents and teachers. Ways of handling the 3 classes and techniques for school classification are brought in with reference to individual examples. Alsop's conclusion is that emphasis should be placed on providing a normal form of activity in which the child will attain the normal goals, and on avoidance of adding to the child's sense of frustration and anxiety by branding him with deficiencies. Not all children can be cured or saved but many can be given a good steer in the right direction.—(Courtesy of *J. Speech Disorders*).

4153. Barker, Roger G. (*Clark U., Worcester, Mass.*) Psychodrama in teaching scientific method in the social sciences. *Sociatry*, 1947, 1, 179-182.—Social situations can be acted out for classes. By illustrating various approaches to personal social problems a foundation is laid for understanding them. Further acting out of scenes based on this understanding will "lay the emotional and intellectual foundations for more adequate behavior."—R. B. Ammons.

4154. Bedell, R. C. Training manuals in naval aviation. In Kelly, G. A., *New methods in applied psychology* (see 21: 4140), 1947. Pp. 119-126.—The contribution of educational psychologists to the preparation of a series of standard textbooks and manual material for use in the program of training thousands of naval aviators is described.—C. M. Louttit.

4155. Bradford, Leland P. (*National Education Association, Washington, D. C.*) The use of psychodrama for group consultants. *Sociatry*, 1947, 1, 192-197.—Expert consultants tend to talk over the group's head, fail to answer questions needing answering, and may cover too narrow an aspect of the field. Two actual examples are given where psychodrama proved useful in avoiding these pitfalls.—R. B. Ammons.

4156. Burt, Cyril. Symposium on the selection of pupils for different types of secondary schools: I. A general survey. *Brit. J. educ. Psychol.*, 1947, 17, 57-71.—Allocation of pupils to the various types of secondary schools should be based on a systematic study of the child's whole personality plus a realistic appraisal of his sociological background. In the case of intellectual qualities, the general factor of intelligence which is the determining factor in educational performance at the age of 11 can be assessed with reasonable accuracy by standardized tests. Special abilities must also be taken into account, although they are less susceptible to measurement, and less valuable for selection than innate general intelligence. Since case studies reveal physical disability and defects of character are often associated with school failure, these considerations require attention. Finally, the type of education suitable for the individual child should be determined by present and future sociological realities. The need for supplementary study is especially important in borderline cases, where school records and interviews have particular application.—R. C. Strassburger.

4157. Chambers, M. M. (*American Council on Education, Washington, D. C.*) What was good in armed-services training? *Sch. Rev.*, 1947, 55, 285-290.—The educational implications of military training programs are analyzed in this article which presents a composite of comments from the experience of educators in a number of states and institutions. The impressive results of wartime training are understandable in view of the resources of money and personnel available to the armed services, the clarity of aims, the motivation of students, and the authority exercised. Integration of curriculum is a favorable factor. The success of these programs stresses the need for selection of students solely on the basis of their qualifications. Frequent objective evaluation of achievement, together with rapid elimination of failures, are significant factors influencing the results. Individual instruction and ample, effective teaching aids highlight the procedures employed. The conditions for implementing these implications in educational practice are considered.—R. C. Strassburger.

4158. Feder, D. D. A technique for standardizing instruction. In Kelly, G. A., *New methods in applied psychology* (see 21: 4140), 1947. Pp. 110-114.—In order to standardize the achievement of graduates from the several Navy schools in the elementary work in electronics training an achievement test with 4 forms was developed. The results from this test were used in standardizing the instructional procedures of different schools and instructors, as well as measuring the students' achievement.—C. M. Louttit.

4159. Ghosh, Rabi. (*Calcutta U., India.*) New apparatus and method of teaching arithmetic. *Indian J. Psychol.*, 1943, 18, 35-43.—The apparatus described consists of blocks, bars, and squares in 4 different colors. Both the shape and the color help

determine the value of the individual piece. These blocks, when used with an arithmetic tray and a counting board, may be used to teach the child counting, addition, subtraction, multiplication, division, squares, cubes, fractions, and decimals. The author feels that his method has the advantage of appealing directly to the child's interests.—*G. A. Kimble.*

4160. Goodman, Elizabeth, O'Connor, Eileen, & Shugerman, Estelle E. (*Queens General Hosp., Jamaica, N. Y.*) Training in remedial reading and psychotherapy. *Amer. J. Psychother.*, 1947, 1, 161-182.—25 American-born, elementary-school children of dull-normal or higher intelligence, who exhibited reading difficulty were treated for 9 months with a combination of psychotherapy and specific remedial reading training. At the end of this period, school teachers reported that 10 of the 16 who completed the course showed positive social improvement, and 11 showed definite progress in reading. Comparison of questionnaire results from the schools with direct observation suggested a marked difference in evaluation, the teachers tending to judge social improvement in terms of discipline, and reading progress in relation to grade placement rather than to initial level before training. It is concluded that "the school is not the best place to conduct a remedial reading program for children who present neurotic features . . . remedial reading should be conducted in a place where psychotherapy is combined with reading instruction."—*E. M. L. Burchard.*

4161. Halder, Ras Mohun. (*Dadar Sch. for Blind, Bombay, India.*) The visually handicapped in India; education of blind children. Bombay: Thacker, 1947. Pp. xxi + 284. Rs. 18/8.—First printed in 1943, this book is written for an Indian public and serves a dual purpose, (1) to acquaint philanthropists, educators and others interested in the blind with the present status of existing institutions, and (2) to set forth the needs of the young blind. American and English psychological educational methods and research are discussed in terms of what can be utilized therefrom by Indian schools. The book is divided into four parts as follows: The Social and Mental Life of the Blind, General Conditions and Information, School Subjects, Education and Mental Measures, Education as Guidance for Blind Pupils. 61 references.—*K. E. Maxfield.*

4162. Jalota, S. Intelligence-testing in India and mental deficiency among the school and college students. *Indian J. Psychol.*, 1943, 18, 55-56.—When I.Q.s of Indian children are calculated in a number of ways, the mean I.Q. is found to range from 97.18 to 102.72. The S.D. of the distribution ranges from 20.0 to 25.98. By Western standards, there is a greater number of backward students in the population and also a greater number of superior students than one would expect. The occurrence of the large number of backward students is interpreted as resulting from an unsuitability of many test items for the oriental student and a tendency for examining boards to admit too many doubtful cases to the schools.—*G. A. Kimble.*

4163. Kelly, E. L. The improvement of flight instruction. In *Kelly, G. A., New Methods in applied psychology* (see 21: 4140), 1947. Pp. 103-109.—The contributions of psychologists to the problems involved in training military airplane pilots were chiefly the adaptation of standard procedures of educational psychology, rather than experimentation. Significant problems included the recording of flight instructions, the selection and training of flight instructors, measurement of achievement, preparation of instructional material, and the use of counseling techniques.—*C. M. Louttit.*

4164. Kuppuswamy, B. Language and education. *Indian J. Psychol.*, 1945, 20, 1-13.—On the average, Indian students who learn their studies in their mother tongue do as well as those who study in English. Since this is so, it seems likely that the native Indian languages will be used more extensively in the colleges. At the same time the poorest teachers in India are those who teach the mother tongue. The author suggests a number of ways in which this situation can be improved. Among those emphasized are the publication of better textbooks and government subsidy.—*G. A. Kimble.*

4165. Landy, Edward. (*Montclair High School, Montclair, N. J.*) Educating for occupational competence. *Sch. Rev.*, 1947, 55, 278-284.—The obligations of the school in respect to the development of occupational competence are examined. Basic to the concept of satisfactory occupational adjustment are (1) the qualities useful in getting and holding a job, and (2) the quality of appraisal and planning by youth. With respect to the former, the experiences of the last decade reveal needed changes in the school program to equip youths to obtain and hold jobs. There is further evidence of a lack of intelligent appraisal and planning in the vocational thinking of youth. Promising trends toward a meeting of these needs are found in the increasing emphasis upon work experience as a method of learning. The essentials of such a program of direct action are outlined.—*R. C. Strassburger.*

4166. Pace, C. R., & Gibson, D. L. Surveys of opinion of Navy training and educational programs. In *Kelly, G. A., New methods in applied psychology* (see 21: 4140), 1947. Pp. 114-119.—Two opinion polls on reactions of Naval enlisted personnel to the training they received in rating specialty schools and to the Educational Services program are reported. In each case the questionnaire returns provided administratively useful data and demonstrated "the value of opinion polls applied to problems of Navy training and education."—*C. M. Louttit.*

4167. Raybould, A. B. Factors conditioning achievement in French among a group of adolescents. *Brit. J. educ. Psychol.*, 1947, 17, 114-115.—Abstract of M.A. thesis, University of Birmingham.

4168. Sherman, Mandel, & Cornbach, Lee J. (*U. Chicago, Ill.*) Selected references on educational psychology. *Sch. Rev.*, 1947, 55, 305-307.—A review of publications during 1946, representing

the following areas: general and theoretical discussions, learning, individual differences, child development, and personality. 25-item bibliography.—*R. C. Strassburger.*

4169. Stratemeyer, Florence B. (*Columbia U., New York*), Forkner, Hamden, L., & McKim, Margaret G. Developing a curriculum for modern living. New York: Bureau of Publications, Teachers College, Columbia University, 1947. Pp. xiii + 558. \$3.75.—In the course of a research program in childhood and youth education the staff of the Horace Mann-Lincoln Institute of School Experimentation has formulated a theory of a curriculum which utilizes our knowledge of children developing in American society. Major curriculum issues are discussed in relation to the nature of society and the needs of children. A series of charts describes the changing nature and increasing complexity of life situations faced by all persons in developing from children to adults. Ways are discussed by which the school and community may work together in developing the curriculum. Descriptions are given of the functioning of the curriculum on 3 different grade levels throughout a school year. The final chapter serves as a guide for testing the effectiveness of the curriculum in achieving its purposes.—*M. Mercer.*

4170. Taylor, W. S., Hankins, Frank H., & Lazerowitz, Alice A. (*Smith Coll., Northampton, Mass.*) Students' ratings of instruction; a study made at Smith College. *J. higher Educ.*, 1947, 18, 202-206.—The authors were members of a committee voted by the Smith College faculty in 1944 to study and make recommendations concerning students' ratings of courses. Inquiries were made concerning practices at other colleges and universities. In the summer terms of 1943 and 1944 ratings were obtained at Smith College. The principal arguments for and against students' ratings are presented. The authors believe that systematic students' ratings can be valuable both for the teacher and for the administration, although the majority of the Smith College faculty, on the basis of a recent adverse vote, do not agree with them.—*M. Murphy.*

4171. Wall, W. D. (*U. Birmingham, England*) The opinions of teachers on parent-teacher co-operation. *Brit. J. educ. Psychol.*, 1947, 17, 97-113.—Of 399 questionnaires on parent-teacher co-operation sent out to the schools of Nottinghamshire County replies were received from 262. Such co-operation was judged to be valuable at all periods of the child's school life, and most especially at the time of vocational decision. There was substantial agreement that the benefits of co-operation lay in increased interest on the part of the parents, enhanced understanding of the child by the teacher and by the parent, assistance in the child's moral development, and improved relations between teacher and child. Fear was expressed that parent-teacher co-operation may lead to criticism of the teacher at home and parental interference with the teacher's work at school. Emphasis was placed upon

the need for co-operation when the child experiences scholastic or social difficulty, and suffers undue anxiety. The forms of co-operation most favored were parental visits to the school and casual meetings on the occasion of special school functions.—*R. C. Strassburger.*

4172. White, Helen Walker. Counseling women students. *J. higher Educ.*, 1947, 18, 312-316; 337-338.—Detailed information was obtained from 14 women's residence colleges concerning their counseling and advising programs. The programs follow one of 3 general plans: a considered program within the traditional residence structure; an integral part of an over-all educational program; procedures relatively unconsidered in relation to the total college organization. All but 2 of the colleges combine residence and counseling functions in the same persons. It is essential that residence personnel have academic status if they are to counsel, lest their social status be beneath that of those whom they counsel or below that of others from whom students seek guidance. Many colleges believe they need professional services obtained from psychiatrists or psychologists. Whatever program is followed, the principal difficulty lies in obtaining adequate personnel which costs more than most colleges are willing to pay. Most counseling programs seem to have grown through accretion without much planning and it is surprising that they operate as well as they do.—*M. Murphy.*

4173. White, Verna. (*Syracuse U., Syracuse, N. Y.*) Measuring competence in English of armed services personnel. *Sch. Rev.*, 1947, 55, 345-355.—Procedures employed in the construction and standardization of a test to measure competence in English at the high-school level of armed forces personnel are described. The scope of the test developed is limited to reading skill considered in respect to a wide range of objectives. A central theme dominates the reading selections chosen for each of the 2 forms of the test, one for military and the other for civilian use. Evidence of validity is found in the ability of the test to discriminate among students in the several grades, as well as between the good and poor students at each grade level. Split-half reliability is high.—*R. C. Strassburger.*

[See also abstracts 3938, 3949, 3961, 3963, 3965, 4046.]

#### PSYCHOLOGICAL TESTS

4174. Bittner, R. H. The Army General Classification Test. In Kelly, G. A., *New methods in applied psychology* (see 21: 4140), 1947. Pp. 45-55.—The AGCT, designed to measure general learning ability, contains 3 types of items in spiral omnibus form, viz., vocabulary, arithmetic, and "block counting." The original form was standardized on a sample of 2675 Regular Army enlisted men. 3 other forms were developed. Correlation between form 1a and 1b was .95 ( $N = 3856$ ). Reliabilities on all 4 forms were .90 or above. Pertinent correlations

found were: with age, .02; with highest grade completed, .73; with Army Alpha, .79 and .90; with ACE, .65 and .79. Validity coefficients are given for 51 samples of various Army Speciality groups.—*C. M. Louttit.*

4175. Brown University. Preliminary analyses of the NRC neurotic inventory. (1942; Pub. Bd. No. 55788.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 8. \$1.00, microfilm; \$1.00, photostat.—A population of 316 men (soldiers, sailors, and students), fractionated into groups of comparable intelligence, gave results which indicated that (Shipley) score in the NRC Neurotic Inventory is a function of intelligence. From the level of very low intelligence to average, there is no change in the position of the percentile curves for homogeneous intelligence groupings as intelligence increases. The percentile curves for the different intelligence groups are approximately superimposed. As intelligence increases from average to a higher level, the percentile curves for homogeneous intelligence groups are displaced more and more toward the high score extreme. A rough "correction," based on intelligence score, is suggested. A preliminary item analysis of the NRC Neurotic Inventory, based on 886 "normals" and 37 "cases," indicated that a new method of scoring might be desirable in the application of the test to service personnel. More data are required from military groups before this tentative finding is acceptable.—(Courtesy of *Bibl. scient. industr. Rep.*, U. S. Dep. Commerce).

4176. Brown University. Preliminary results with a battery of tests developed for the selection of emotionally unstable service personnel. (1942; Pub. Bd. No. 55790.) Washington, D. C.: U. S. Dep. Commerce, 1947. Pp. 16. \$1.00 microfilm; \$2.00, photostat.—This report summarizes findings obtained by (a) applying several tests to a "validating" group of 41 men who have shown signs of "emotional instability" and (b) comparing their performances with those of a "standard" group of 72 individuals. The fusion reaction time test and the NRC Neurotic Inventory score ("corrected" for intelligence) are promising on the selective side. Because of the nature of the control groups little can be said about the place of an intelligence examination in the projected battery of tests, but an intelligence examination is considered to be a basic requirement for selection. There are no quantita-

tive data on the NRC troublemaking inventory; however, certain observations seem to make it clear that men who are characterized as "troublemakers" score high on this particular test. Data on the Willoughby schedule give an uncertain probability of discrimination. Analysis of the data shows that other tests are low in discriminative characteristics, and these have been rejected. Data for successive screenings (arbitrarily selected "critical" scores) by the retained tests show that "failure" occurs in 86% of the "validating" group and in only 29% of the "standard." This differential rate of "failure" indicates that this test battery may be valuable for selecting "emotionally unstable" individuals. Further analyses on greater populations are required.—(Courtesy of *Bibl. scient. industr. Rep.*, U. S. Dep. Commerce).

4177. Oxlade, M. N., & Walker, K. F. (Commonwealth Department of Labour and National Service, Sydney, Australia.) A note on adapting the Minnesota Rate of Manipulation Test to factory use. *J. appl. Psychol.*, 1947, 31, 247-248.—Results obtained from the use of a modified form of the MRMT gave correlations between the sums of trials and the best of trials—for placing and turning—between .87 and .97; 12 of the 16 correlations being .90 or above.—*H. Hill.*

4178. Rey, Andr6. (U. Geneva, Switzerland.) Epreuves de dessin; témoins du développement mental. (Drawing tests as evidence of mental development.) *Arch. Psychol.*, Genève, 1946, 31, 369-380.—A test described as the construction of a scene was derived and standardized by Dr. H. M. Fay of Paris, in 1924. The norms were revised by J. Wintsch, in 1935, after the test was administered to 500 subjects from 7 to 12 years old. It can be given individually or to a group. The child is allowed five minutes to make a drawing suggested by the statement "A lady takes a walk and it rains." The more intelligent the subject the more detailed the drawing. Achievement up to the age of 12 is progressive from year to year, but after 12 results are less reliable. Directions are given for interpretation and scoring somewhat after the manner of the Goodenough test, which is commended by the author.—*G. E. Bird.*

[See also abstracts 3799, 3870, 3915, 3916, 4095, 4097.]

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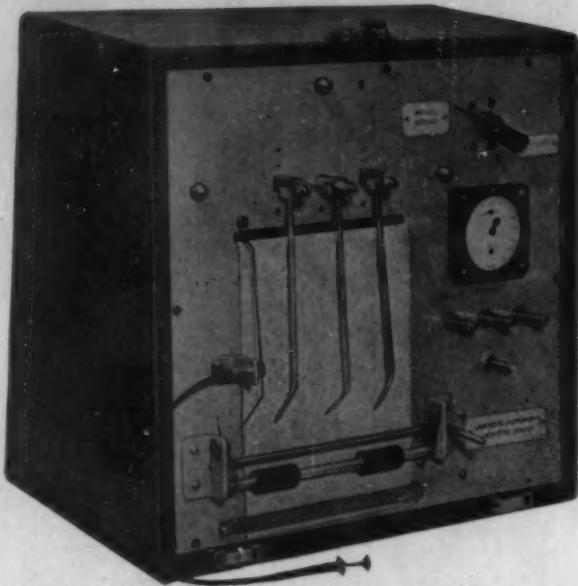
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